



211164

STIC EIC 2100 Search Request Form

Today's Date: 12/22/06

What date would you like to use to limit the search?

Priority Date:

Other:

Name Susan Bayan
AU 2167 Examiner # 77889
Room # 2-05 Phone 41675
Serial # 10/762,866

Format for Search Results (Circle One):

PAPER DISK EMAIL

Where have you searched so far?

USP DWPI EPO JPO ACM IBM TDB
IEEE INSPEC SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) YES NO

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at <http://ptoweb/patents/stic/stic-tc2100.htm>.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

Is this request for a BOARD of APPEALS case? (Circle One) YES NO

Is this case a SPECIAL CASE? (Circle One) YES NO

Apparatus Method for localized protected imaging of a file system

Copies file of file system to a locally stored image file within same partition.

pre-determined area: beginning of image initial allocation area

Restoration of file system

* beginning of image marker (pointer)

location info.

Corrupted directory FAT17 directory/volume

Inventor: Kevin Turpin

Assignee: A/tiris

File attributes:
ownership
access control
timestamp
archival attribute
encryption att.
compression

STIC Searcher BMing

Phone 2-3528

Date picked up 12-22-06

Date Completed 12-22-06



Set	Items	Description
S1	2320	(RECREAT? OR RE()CREAT? OR RESTOR? OR RE() (MAKE? ? OR MAKI-NG OR MADE) OR REPROD? OR RECOVER? OR FIX??? OR BACK???()UP OR BACKUP OR RECLAM? OR RECLAIM?) (7N) (FILESYSTEM? ? OR FILE()SY-STEM? ? OR ALLOCAT?)
S2	2941009	FLAG? ? OR INDICATOR? OR MARKER? OR REMINDER? OR SIGNAL? OR ALERT? OR ALARM? OR SIGN? ? OR CUE OR BLINKER? OR SYMBOL? ? - OR POINTER?
S3	190370	(EXTRACT? OR CUT OR CUTS OR CUTTING OR CULL??? OR GATHER? - OR COLLECT? OR PARS???) (5N) (FILE? ? OR RECORD? ? OR DATA? ? OR INFORMATION?? OR CONTENT? ?)
S4	5728	(RECREAT? OR RE()CREAT? OR RESTOR? OR RE() (MAKE? ? OR MAKI-NG OR MADE) OR REPROD? OR RECOVER? OR RE()MAP?) (3N) (TABLE? OR LIST??? ? OR DIRECTOR? OR INDEX? OR CATALOG? OR REGIST?)
S5	0	S1 AND S2 AND S3 AND S4
S6	55	S1 AND S4
S7	11	S6 AND S2

File 350:Derwent WPIX 1963-2006/UD=200681
 (c) 2006 The Thomson Corporation

File 347:JAPIO Dec 1976-2006/Aug(Updated 061130)
 (c) 2006 JPO & JAPIO

7/69,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corporation. All rts. reserv.

0014323630 - Drawing available

WPI ACC NO: 2004-511339/

XRPX Acc No: N2004-404458

Optical disk e.g. hard disk stores reproduction list having list of group numbers allocated to data groups, using which data to-be-reproduced in random is selected

Patent Assignee: ALPINE KK (ALPN)

Inventor: MURATA M

Patent Family (1 patents, 1 countries)

Patent Application

Number	Kind	Date	Number	Kind	Date	Update
JP 2004178727	A	20040624	JP 2002345424	A	20021128	200449 B

Priority Applications (no., kind, date): JP 2002345424 A 20021128

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 2004178727	A	JA	8	4	

Alerting Abstract JP A

NOVELTY - The disk stores the data in groups with group number, and stores **reproduction list** having list of allocated group numbers. A random selector (35) selects the data to-be-reproduced in random, by referring the **reproduction list**.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- 1.data reproduction method; and
- 2.optical disk player.

USE - Optical disk such as hard disk, semiconductor memory, digital versatile disk (DVD), compact disk (CD) and minidisk (MD), storing audio **signal** such as music, and image **signal** such as photography, which are reproduced using optical disk player (claimed).

ADVANTAGE - The seek time of data is reduced and the random reproduction of data is performed efficiently and easily.

DESCRIPTION OF DRAWINGS - The figure shows a block diagram of the audio apparatus. (Drawing includes non-English language text).

- 10 audio apparatus
- 20 hard disk
- 30 controller
- 33 recorder
- 40 display unit

Title Terms/Index Terms/Additional Words: OPTICAL; DISC; HARD; STORAGE; REPRODUCE; LIST; GROUP; NUMBER; ALLOCATE; DATA; RANDOM; SELECT

Class Codes

International Classification (Main): G11B-027/10

(Additional/Secondary): G11B-020/10, G11B-020/12, G11B-027/00

File Segment: EPI;

DWPI Class: T03; W04

Manual Codes (EPI/S-X): T03-J01C; T03-N01; T03-P01F; W04-H01C

Optical disk e.g. hard disk stores reproduction list having list of

group numbers allocated to data groups, using which data to-be-reproduced in random is selected

Alerting Abstract ...NOVELTY - The disk stores the data in groups with group number, and stores **reproduction list** having **list of allocated** group numbers. A random selector (35) selects the data to-be-reproduced in random, by referring the **reproduction list**disk, semiconductor memory, digital versatile disk (DVD), compact disk (CD) and minidisk (MD), storing audio **signal** such as music, and image **signal** such as photography, which are reproduced using optical disk player (claimed...

7/69,K/5 (Item 5 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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0013456525 - Drawing available
WPI ACC NO: 2003-548015/200352
XRPX Acc No: N2003-435341

File control apparatus for computer, has restoration module that restores file allocation table based on map that is generated by storing file number in each map area corresponding to file allocation table

Patent Assignee: FUJITSU LTD (FUIT)

Inventor: ANDO T; ANDOH T

Patent Family (2 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
JP 2003150428	A	20030523	JP 2001343598	A	20011108	200352 B
US 20050076063	A1	20050407	US 2002154848	A	20020528	200525 E

Priority Applications (no., kind, date): JP 2001343598 A 20011108

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 2003150428	A	JA	12	10	

Alerting Abstract JP A

NOVELTY - A data recording module writes data into cluster of data area repeatedly corresponding to file allocation table (FAT). FAT address is stored in FAT during data recording, to create a FAT chain. A file number is stored in each map area corresponding to FAT of each file, based on head FAT pointer and FAT chain of file attribute area, to generate a FAT map. A restoration module restores FAT based on FAT map.

DESCRIPTION - An INDEPENDENT CLAIM is also included for file system.

USE - For file system (claimed) including mass recording media such as hard disk used in computer.

ADVANTAGE - The defect file is recovered easily, without overlapping FAT.

DESCRIPTION OF DRAWINGS - The figure shows a flowchart of defect file recovery operation. (Drawing includes non-English language text).

Title Terms/Index Terms/Additional Words: FILE; CONTROL; APPARATUS; COMPUTER; RESTORATION; MODULE; ALLOCATE; TABLE; BASED; MAP; GENERATE; STORAGE; NUMBER; AREA; CORRESPOND

Class Codes

International Classification (Main): G06F-012/00

(Additional/Secondary): G06F-003/06, G11B-020/10, G11B-020/12

File Segment: EPI;

DWPI Class: T01; T03

Manual Codes (EPI/S-X): T01-C01; T01-H01B1; T03-A08A1C; T03-A10E3

File control apparatus for computer, has restoration module that restores file allocation table based on map that is generated by storing file number in each map area corresponding...

Original Titles:

FILE SYSTEM CAPABLE OF RESTORING DEFECTIVE FILE...

... File system for enabling the restoration of a deffective file
...stored in each map area corresponding to FAT of each file, based on head FAT pointer and FAT chain of file attribute area, to generate a FAT

map. A restoration module...

Original Publication Data by Authority

Claims:

...file attribute area in which at the least a file name and a head FAT pointer are recorded, comprising: a data recording module for, during data recording, repetitively writing data in...

...generate a FAT chain; and a FAT restoration module for, in accordance with the head FAT pointer in said file attribute area of said directory and said FAT chain, generating a...

7/69,K/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0007640467 - Drawing available

WPI ACC NO: 1996-259429/

XRPX Acc No: N1996-218314

Priority encoder - encodes two or more register addresses to which register contents are to be transferred from register list, when instruction for transferring register contents is executed

Patent Assignee: MITSUBISHI DENKI KK (MITQ)

Inventor: TAKATA Y; YOSHIDA T

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
US 5519881	A	19960521	US 1991751493	A	19910829	199626 B
			US 1994324313	A	19941017	

Priority Applications (no., kind, date): JP 1990231968 A 19900829

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 5519881	A	EN			Continuation of application US 1991751493

Alerting Abstract US A

An instruction decoder decodes instructions and an instruction executing unit coupled to the instruction decoder has ordered data registers in a register file.

A register holds a bit string, included in the multifunctional instruction, having an ordered number of bit positions, with a bit field in the bit string comprising two or more contiguous bit positions, and with each bit position holding a certain bit value.

An operation circuit, coupled to the register receives the register specifying bit string, for performing a logical AND operation on bit values held in contiguous bit positions in bit fields in the bit string held by the register, to generate a result bit string resulting from each logical AND operation.

Each bit value is logically ANDed with, at least, one bit value held in an adjacent bit position.

An encoder, coupled to the operation circuit and responsive to the results of the logical AND operation, outputs an encoded **signal** which encodes a first position of each bit field indicating where two or more bits in the bit positions in the bit field have the same value, by searching the result bit string.

A register address specifying unit, coupled to the encode circuit receives the encoded **signal**, for specifying the address of a first register and a second register adjacent to the first register in the register file which are specified by bit values in contiguous bit positions having the first logical value.

ADVANTAGE - In compiler, data to be saved or **restored** at entering or exiting procedures are **allocated** to registers having serial numbers, so that data is saved in memory, or **restored** to **register** from memory up to two times faster.

Title Terms/Index Terms/Additional Words: PRIORITY; ENCODE; TWO; MORE; REGISTER; ADDRESS; CONTENT; TRANSFER; LIST; INSTRUCTION; EXECUTE

Class Codes

International Classification (Main): G06F-007/00

File Segment: EPI;
DWPI Class: T01
Manual Codes (EPI/S-X): T01-D02; T01-E01C

Alerting Abstract ...operation circuit and responsive to the results of the logical AND operation, outputs an encoded **signal** which encodes a first position of each bit field indicating where two or more bits...
...A register address specifying unit, coupled to the encode circuit receives the encoded **signal**, for specifying the address of a first register and a second register adjacent to the...

...ADVANTAGE - In compiler, data to be saved or **restored** at entering or exiting procedures are **allocated** to registers having serial numbers, so that data is saved in memory, or **restored** to **register** from memory up to two times faster.

Original Publication Data by Authority

Claims:

...coupled to said operation circuit to receive said result bit string, for outputting an encoded **signal** specifying the bit position number of a result bit position holding a bit value equal to the first logical value so that said encoded **signal** indicates the bit position number of a bit field in said first bit string having...

7/69,K/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0007286710

WPI ACC NO: 1995-346259/199545

XRPX Acc No: N1995-258882

Dynamically allocating physical registers to procedures - involves storing stack pointer values in parameter passing registers when procedure is called and mapping used virtual registers

Patent Assignee: HEWLETT-PACKARD CO (HEWP); HITACHI LTD (HITA)

Inventor: AMERSON F C; ENGLISH R M; GUPTA R; WATANABE H; WATANABE T

Patent Family (5 patents, 4 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
EP 676691	A2	19951011	EP 1995104498	A	19950327	199545 B
JP 7281897	A	19951027	JP 1995108056	A	19950406	199601 E
US 5564031	A	19961008	US 1994223804	A	19940406	199646 E
			US 1996629041	A	19960412	
EP 676691	A3	19961211	EP 1995104498	A	19950327	199707 E
JP 3529888	B2	20040524	JP 1995108056	A	19950406	200434 E

Priority Applications (no., kind, date): US 1996629041 A 19960412; US 1994223804 A 19940406

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
EP 676691	A2	EN	20	7	
Regional Designated States, Original: DE FR GB					
JP 7281897	A	JA	15	1	
US 5564031	A	EN	17	7	Continuation of application US 1994223804
EP 676691	A3	EN			
JP 3529888	B2	JA	16		Previously issued patent JP 07281897

Alerting Abstract EP A2

The method of allocation registers involves defining a logic register stack formed of several registers. A local relocation term is initialised so as to define an offset for mapping the logical stack into a physical register set. An arbitrary number of stack registers are allocated to a procedure as local registers by initialising a stack **pointer** value to delimit local registers in the stack.

Each local register logical address is mapped into the physical register set in response to a local relocation term during execution of the procedure. The stack **pointer** is stored to form a second stack **pointer** value. Selected parameters are also stored.

USE/ADVANTAGE - In digital computer. Increases average speed of procedure call and return operations. Minimises number of **register** save and **restore** operations. Efficient temporary store **allocation**. Reduces overhead. Increases density of register use.

Title Terms/Index Terms/Additional Words: DYNAMIC; ALLOCATE; PHYSICAL; REGISTER; PROCEDURE; STORAGE; STACK; POINT; VALUE; PARAMETER; PASS; CALL; MAP; VIRTUAL

Class Codes

International Classification (Main): G06F-012/06, G06F-009/40, G06F-009/42
(Additional/Secondary): G06F-009/30, G06F-009/46

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-F04

...involves storing stack pointer values in parameter passing registers when procedure is called and mapping used virtual registers

Original Titles:

...Apparatus for register saving and restoring in a digital computer...

Alerting Abstract ...of stack registers are allocated to a procedure as local registers by initialising a stack pointer value to delimit local registers in the stack...

...set in response to a local relocation term during execution of the procedure. The stack pointer is stored to form a second stack pointer value. Selected parameters are also stored...

...In digital computer. Increases average speed of procedure call and return operations. Minimises number of register save and restore operations. Efficient temporary store allocation. Reduces overhead. Increases density of register use.

Original Publication Data by Authority

Original Abstracts:

...in the called procedure, rather than a priori at compile time, by adjusting register stack pointer values (TOL, OTOL). Only the number of registers actually required by the procedure need be allocated. Optionally, rotating registers (74) may be allocated among the local registers (62). Stack pointer values are stored in one of the parameter passing registers (64) when a procedure is...

...register file. Upon return from a procedure, registers are deallocated by adjusting the register stack pointers to the values stored when the procedure was called...

...in the called procedure, rather than a priori at compile time, by adjusting register stack pointer values. Only the number of registers actually required by the procedure need be allocated. Optionally, rotating registers may be allocated among the local registers. Stack pointer values are stored in one of the parameter passing registers when a procedure is called...

...register file. Upon return from a procedure, registers are deallocated by adjusting the register stack pointers to the values stored when the procedure was called.

Claims:

...registers (62) specified by the first procedure as local registers by initializing a first stack pointer value (TOL) so as to delimit the local registers (62) in the logical register stack...

...stack registers specified by the first procedure as local registers by initializing a first stack pointer value (TOL) so as to delimit the local registers in the logical register stack; </br>initializing a first rotating register pointer value (BOR) and a second rotating register pointer value (TOR) to the first stack pointer value (TOL); </br>allocating registers to the first procedure as rotating registers by incrementing the second rotating register pointer value (TOR) and the first stack pointer value (TOL) by an arbitrary number of registers specified by the first procedure as rotating...

...returning from the first procedure, deallocating the rotating registers by decrementing the second rotating register **pointer** value (TOR) and the first stack **pointer** value (TOL) by number of first procedure rotating registers</br>in connection with a register access...

7/69,K/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0003142984

WPI ACC NO: 1984-238900/198439

Error recovery asynchronous check-pointing for DP system - transfers all tables for programs to disk upon error and returns to memory upon recovery to restore program operation

Patent Assignee: BURROUGHS CORP (BURS)

Inventor: FINLEY R E; FINLEY R F

Patent Family (5 patents, 7 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
EP 119806	A	19840926	EP 1984301634	A	19840312	198439 B
CA 1213064	A	19861021				198647 E
US 4697266	A	19870929	US 1983475154	A	19830314	198741 E
EP 119806	B	19900425	EP 1984301634	A	19840312	199017 E
DE 3482064	G	19900531				199023 E

Priority Applications (no., kind, date): US 1983475154 A 19830314

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing	Notes
EP 119806	A	EN				
Regional Designated States,Original: BE DE FR GB NL SE						
CA 1213064	A	EN				
EP 119806	B	EN				
Regional Designated States,Original: BE DE FR GB NL SE						

Alerting Abstract EP A

The system allocates files and stores data in them in a bulk memory which is up-dated and read under user control. The method of recovery from an unexpected shut down involves forming a **recovery table** in a RAM for each active task that changes data or allocates files. The data generated at predetermined points in the task operation is recorded in the **recovery table**.

The **recovery tables** are transferred to the bulk memory upon a shutdown during any task execution. Each **recovery table** contains an identification of the associated task. A **flag** is recorded in the table to indicate if the data recorded is ready for use during the error recovery process.

ADVANTAGE - Program operation is restored without data base corruption.

Equivalent Alerting Abstract US A

The method recovers an error condition during operation of a program that is modifying a data base without corrupting the data base.

The program includes calls to record the progress of the operation in a table in memory.

On the occurrence of an error condition, the tables for all programs in operation are transferred to a disc.

During error **recovery**, the **tables** are returned to memory where the information stored in the respective tables is used by each active program to restore operation of the particular program to a point where the operation can be completed without corrupting the data base.

Each program is designed to interrogate its own **recovery table** following the occurrence of an error condition to restore operation at a point where the integrity of the data base is assured.

ADVANTAGE - Easily duplicates single day's or single shift operation to update data base.

Title Terms/Index Terms/Additional Words: ERROR; RECOVER; ASYNCHRONOUS; CHECK; POINT; SYSTEM; TRANSFER; TABLE; PROGRAM; DISC; RETURN; MEMORY; RESTORATION; OPERATE; DATA; PROCESS

Class Codes

International Classification (Main): G06F-011/14

(Additional/Secondary): G06F-012/16

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-G03; T01-H09

Alerting Abstract ...under user control. The method of recovery from an unexpected shut down involves forming a **recovery table** in a RAM for each active task that changes data or allocates files. The data generated at predetermined points in the task operation is recorded in the **recovery table** .

...The **recovery tables** are transferred to the bulk memory upon a shutdown during any task execution. Each **recovery table** contains an identification of the associated task. A **flag** is recorded in the table to indicate if the data recorded is ready for use

Equivalent Alerting Abstract ...During error **recovery** , the **tables** are returned to memory where the information stored in the respective tables is used by...

...Each program is designed to interrogate its own **recovery table** following the occurrence of an error condition to restore operation at a point where the...

Original Publication Data by Authority

Original Abstracts:

...condition, the tables for all programs in operation are transferred to a disk. During error **recovery** , the **tables** are returned to memory where the information stored in the respective tables is used by...

...be completed without corrupting the data base. Each program is designed to interrogate its own **recovery table** following the occurrence of an error condition to restore operation at a point where the...

...condition, the tables for all programs in operation are transferred to a disk. During error **recovery** , the **tables** are returned to memory where the information stored in the respective tables is used by...

...be completed without corrupting the data base. Each program is designed to interrogate its own **recovery table** following the occurrence of an error condition to restore operation at a point where the...

Claims:

...under user control. The method of recovery from an unexpected shut down involves forming a **recovery table** in a RAM for each active task that changes data or allocates files. The data generated at predetermined points in the task operation is recorded in the **recovery table** .

...

...The **recovery tables** are transferred to the bulk memory upon a

shutdown during any task execution. Each **recovery table** contains an identification of the associated task. A **flag** is recorded in the table to indicate if the data recorded is ready for use...

...corrupting the data base, characterised in that said method comprises:
allocating a task **recovery** area in a random access memory during the initial processing of each task which may

7/9/11 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
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05293682 **Image available**
INFORMATION PROCESSOR

PUB. NO.: 08-249182 [JP 8249182 A]
PUBLISHED: September 27, 1996 (19960927)
INVENTOR(s): TAKEUCHI SHIGEO
SHINTANI YOICHI
SHONAI TORU
KAMATA EIKI
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP
(Japan)
HITACHI MICROCOMPUT SYST LTD [470864] (A Japanese Company or
Corporation), JP (Japan)
APPL. NO.: 07-109533 [JP 95109533]
FILED: May 08, 1995 (19950508)
INTL CLASS: [6] G06F-009/38
JAPIO CLASS: 45.1 (INFORMATION PROCESSING -- Arithmetic Sequence Units)

ABSTRACT

PURPOSE: To **restore** idle **register** information and a register content with a simple method if a prediction failure becomes clear when dynamic register allocation and the prediction execution of a branch instruction are adopted.

CONSTITUTION: For the prediction execution of the branch instruction, a register saving management circuit 511 saves a register conversion table 504, and the in- **pointer** queue IPQ and the out- **pointer** queue OPQ of a register queue 502 as idle register information. When the instruction executed during the prediction execution of the branch instruction designates the number of register for data writing, a physical register allocation management circuit 501 newly allocates an idle physical register to the number in spite of the type of the instruction without fail. When the prediction execution of the branch instruction is failed, register allocation executed during prediction execution is invalidated, the content of the register is returned to a state before prediction execution, information saved by the circuit 511 is **restored**, **register allocation** information and idle **register** information are **restored** and they are returned to information before prediction execution.

34/69,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0013267705 - Drawing available
WPI ACC NO: 2003-353526/200333
XRPX Acc No: N2003-282424

Exception handling method involves obtaining and decoding unwind information for exception function to determine location of register contents and storing registers with determined register contents

Patent Assignee: BOLING E (BOLI-I); BORLAND SOFTWARE CORP (BORL-N)
Inventor: BOLING E

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
US 20030023905	A1	20030130	US 2001306335	P	20010718	200333 B
			US 2002198836	A	20020718	
US 7007198	B2	20060228	US 2002198836	A	20020718	200616 E

Priority Applications (no., kind, date): US 2001306335 P 20010718; US 2002198836 A 20020718

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20030023905	A1	EN	11	7	Related to Provisional US 2001306335

Alerting Abstract US A1

NOVELTY - An exception function in which exception occurred is determined by looking up the exception location in the generated map. An unwind information is obtained for exception function and is decoded to determine the location of register contents. The register contents are obtained and register is stored with the register contents.

USE - For processing exception occurred in execution of computer software.

ADVANTAGE - Improves overall performance of computer application at start up time of computer software.

DESCRIPTION OF DRAWINGS - The figure shows the flowchart explaining the method of unwinding an exception.

Title Terms/Index Terms/Additional Words: HANDLE; METHOD; OBTAIN; DECODE; UNWIND; INFORMATION; FUNCTION; DETERMINE; LOCATE; REGISTER; CONTENT; STORAGE

Class Codes

International Classification (Main): H04B-001/74
International Classification (+ Attributes)
IPC + Level Value Position Status Version
G06F-0011/00 A I F B 20060101

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-F05A; T01-F05B2; T01-F05G5; T01-H01D; T01-J20C

Original Publication Data by Authority

Original Abstracts:

...the unwind phase, the unwinder attempts to unwind the stack up to the interested frame, **restoring** callee-saved **register** values, and other pertinent processor-specific information, such as the stack **pointer**, and

frame register. The unwinder then transfers control to the handler code specified by the...

...the unwind phase, the unwinder attempts to unwind the stack up to the interested frame, **restoring** callee-saved **register** values, and other pertinent processor-specific information, such as the stack **pointer**, and frame register. The unwinder then transfers control to the handler code specified by the...

Claims:

...method of handling an exception comprising the steps of: generating a map of function locations; **generating** unwind **information** for at least one function; **capturing** an exception location, the exception location being a location at which an exception occurs; determining...

Set	Items	Description
S1	725	(RECREAT? OR RE()CREAT? OR RESTOR? OR RE() (MAKE? ? OR MAKING OR MADE) OR REPROD? OR RECOVER?) (5N) (FILESYSTEM? ? OR FILE-()SYSTEM? ? OR ALLOCAT?)
S2	391337	(SNAPSHOT? OR MIRROR? OR COPY??? OR COPIE? ? OR IMAGE? OR -IMAGING OR CAPTUR? OR REPLICA?) (5N) (FILE? ? OR RECORD? ? OR D-ATA? ? OR INFORMATION?? OR CONTENT? ?)
S3	65040	S2 (5N) (CREAT? OR PRODUC? OR DEVELOP? OR ORIGINAT? OR MAKE? OR MAKING? OR MADE OR GENERAT?)
S4	60003	(BEGIN? OR START?()POINT? ? OR INITIAL OR START? OR COMMEN-C?) (3N) (FLAG? ? OR INDICATOR? OR MARKER? OR REMINDER? OR SIGN-AL? OR ALERT? OR ALARM? OR SIGN? ? OR CUE OR BLINKER? OR SYMB-OL? ? OR POINTER?)
S5	5610	S4 (7N) (CONTAIN??? OR PROVID? OR SUPPLY? OR SUPPLIE? ? OR I-MPLANT? OR EMBED? OR FIT OR FITS OR FITTED OR FITTING OR BUIL-TIN OR (BUILD? OR BUILT) () IN OR PRE()SUPPL? OR INSTALL?)
S6	15820	S4 (7N) (WITHIN OR INSIDE? OR INTERNAL? OR INTERIOR? OR INTE-RIOUR? OR IN OR INTRA OR INSERT? OR HAS OR CONTAIN??? OR INLA-Y? OR ATTACH? OR INGRAIN? OR IMPLANT? OR INCLU?)
S7	70562	(SAFEGUARD? OR SAFE??? ? OR SECUR? OR LOCK??? OR GUARD? OR SHIELD? OR AUTHORI? OR PROTECT?) (3N) (FILE? ? OR RECORD? ? OR -DATA? ? OR INFORMATION?? OR CONTENT? ?)
S8	190370	(EXTRACT? OR CUT OR CUTS OR CUTTING OR CULL??? OR GATHER? -OR COLLECT? OR PARS???) (5N) (FILE? ? OR RECORD? ? OR DATA? ? OR INFORMATION?? OR CONTENT? ?)
S9	5700	(RECREAT? OR RE()CREAT? OR RESTOR? OR RE() (MAKE? ? OR MAKING OR MADE) OR REPROD? OR RECOVER?) (3N) (TABLE? OR LIST??? ? OR DIRECTOR? OR INDEX? OR CATALOG? OR REGIST?)
S10	0	S3 AND S4:S6 AND S7 AND S8 AND S9
S11	0	S1 AND S3 AND S4
S12	1	S1 AND S4
S13	2	S3 AND S4:S6 AND S7
S14	84	S1 AND RESTOR?/TI
S15	0	S14 AND S4
S16	8	S14 AND S3
S17	3	S12:S13
S18	8	S16 NOT S17
S19	76	S14 NOT S18
S20	15	S19 AND (FLAG? ? OR INDICATOR? OR MARKER? OR REMINDER? OR -SIGNAL? OR ALERT? OR ALARM? OR SIGN? ? OR CUE OR BLINKER? OR -SYMBOL? ? OR POINTER?)
S21	43	S2 AND S8 AND S9
S22	1	S21 AND S7
S23	26	S17:S18 OR S20
S24	43	S21 NOT S23
S25	2263	(RECREAT? OR RE()CREAT? OR RESTOR? OR RE() (MAKE? ? OR MAKING OR MADE) OR REPROD? OR RECOVER? OR FIX??? OR BACK???()UP OR BACKUP) (7N) (FILESYSTEM? ? OR FILE()SYSTEM? ? OR ALLOCAT?)
S26	2941009	FLAG? ? OR INDICATOR? OR MARKER? OR REMINDER? OR SIGNAL? OR ALERT? OR ALARM? OR SIGN? ? OR CUE OR BLINKER? OR SYMBOL? ? -OR POINTER?
S27	15194	S26 (7N) (DENOTE? OR SPECIF? OR INDICAT? OR ESTABLISH? OR SH-OW??? OR REVEAL? OR MARK??? OR PINPOINT?) (5N) (BEGIN? OR START-?()POINT? ? OR INITIAL OR START? OR COMMENC?)
S28	0	S25 AND S2:S3 AND (S4 OR S26:S27) AND S7 AND S8 AND S9
S29	3	S25 AND S27
S30	0	S3 AND S27 AND S8 AND S9
S31	138	S3 AND S9
S32	24	S31 AND S26
S33	69	S23:S24
S34	20	S32 NOT S33

File 350:Derwent WPIX 1963-2006/UD=200681

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File 347:JAPIO Dec 1976-2006/Aug (Updated 061130)

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18/69,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0014777705 - Drawing available
WPI ACC NO: 2005-125382/200514
XRPX Acc No: N2005-108124

Digital image e.g. digital video image, decoding process for image display device e.g. mobile telephone screen, involves decoding sub-sets of modified data to restore decoded sub-image, and allocating memory with decoded image data

Patent Assignee: CIRA SOC COMPRESSION IMAGES EN RESEAUX (CIRA-N)

Inventor: HOCHBERG S P

Patent Family (2 patents, 106 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
FR 2858096	A1	20050128	FR 20038991	A	20030723	200514 B
WO 2005010815	A2	20050203	WO 2004FR1942	A	20040722	200514 E

Priority Applications (no., kind, date): FR 20038991 A 20030723

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
FR 2858096	A1	FR	30	6	
WO 2005010815	A2	FR			

National Designated States,Original: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Regional Designated States,Original: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

Alerting Abstract FR A1

NOVELTY - The process involves allocating a memory of an image whose resolution is equal to RXm by RYm size of another image. The values of parameters RX1 and RY1 giving the former image size are replaced by the values RXm and RYm in a set of data. Each of the sub-sets of data modified by using an inverse transform is decoded to restore the decoded sub-image. The memory is allocated with the decoded image data to generate the latter image .

DESCRIPTION - An INDEPENDENT CLAIM is also included for a device to implement a digital image decoding process.

USE - Used in an image display device e.g. mobile telephone screen, for decoding a digital image e.g. digital video image and medical image, broadcasted through a data transmission network e.g. Internet, and a telecommunication network for telediagnosis application and video monitoring application.

ADVANTAGE - The process permits to restore by decoding an image of adjustable size according to the user needs. The process permits to limit the size of the memory allocated for the decoding of the image irrespective of the size of the original image. The process performs decoding of the images without the need for adaptation step and without additional calculations, thus being simple and hence reducing the processing time.

DESCRIPTION OF DRAWINGS - (Drawing contains non-English language text)
The drawing shows a flow chart of a digital image decoding process.

Title Terms/Index Terms/Additional Words: DIGITAL; IMAGE; VIDEO; DECODE; PROCESS; DISPLAY; DEVICE; MOBILE; TELEPHONE; SCREEN; SUB; SET; MODIFIED;

DATA; RESTORATION; ALLOCATE; MEMORY

Class Codes

International Classification (Main): G06T, G09G-005/391

(Additional/Secondary): H04N-007/24

File Segment: EngPI; EPI;

DWPI Class: T01; W01; P85

Manual Codes (EPI/S-X): T01-J06A; T01-J10A2; T01-J10D; T01-N01D1B;

W01-C01D3C; W01-C01Q; W01-C05B1

...display device e.g. mobile telephone screen, involves decoding sub-sets of modified data to restore decoded sub-image, and allocating memory with decoded image data

...is decoded to restore the decoded sub-image. The memory is allocated with the decoded image data to generate the latter image .

18/69,K/3 (Item 3 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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0014249186 - Drawing available

WPI ACC NO: 2004-435340/

XRPX Acc No: N2004-344256

Computer system generates snapshot of image of previous file system at set period, by restoring content of file and higher-order directory information, based on stored image and present image of file system

Patent Assignee: TOSHIBA KK (TOKE)

Inventor: HOSHINA S; WAKAMORI O

Patent Family (1 patents, 1 countries)

Patent Application

Number	Kind	Date	Number	Kind	Date	Update
JP 2004157958	A	20040603	JP 2002377173	A	20021226	200441 B

Priority Applications (no., kind, date): JP 2002265856 A 20020911

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 2004157958	A	JA	26	18	

Alerting Abstract JP A

NOVELTY - A log memory stores the image of file system before updating the file content, along with identifier of file/directory. A **generating** unit generates the **snapshot of image of previous file system**, at predetermined period, by **restoring** the content of file before updating file and higher-order directory information, based on stored image and present image of file system.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

1.file control method; and

2.file control program.

USE - **For generating** snapshot of image of file system.

ADVANTAGE - Generates the snapshot of image of file system, efficiently.

DESCRIPTION OF DRAWINGS - The figure shows the schematic diagram illustrating the image recording operation. (Drawing includes non-English language text).

113log storage area

Title Terms/Index Terms/Additional Words: COMPUTER; SYSTEM; GENERATE; SNAPSHOT; IMAGE; FILE; SET; PERIOD; RESTORATION; CONTENT; HIGH; ORDER; DIRECTORY; INFORMATION; BASED; STORAGE; PRESENT

Class Codes

International Classification (Main): G06F-012/00

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-F05E; T01-G03; T01-S03

Computer system generates snapshot of image of previous file system at set period, by restoring content of file and higher-order directory information, based on stored image and present image...

Alerting Abstract ...of file system before updating the file content,

along with identifier of file/directory. A **generating** unit generates the **snapshot of image** of previous **file system**, at predetermined period, by **restoring** the content of file before updating file and higher-order directory information, based on stored...

...USE - **For generating snapshot of image of file system...**

... **ADVANTAGE** - Generates the snapshot of image of file system, efficiently

18/69,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0013845846

WPI ACC NO: 2004-023752/

XPX Acc No: N2004-018674

Fast backup and restoration method for large file system , involves using file server to store snapshot image of large file system and taking backup from file server to tape media

Patent Assignee: MISZTAL J (MISZ-I)

Inventor: MISZTAL J

Patent Family (1 patents, 1 countries)

Patent

Application

Number	Kind	Date	Number	Kind	Date	Update
CA 2384020	A1	20031109	CA 2384020	A	20020509	200403 B

Priority Applications (no., kind, date): CA 2384020 A 20020509

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
CA 2384020	A1	EN	3	0	

Alerting Abstract CA A1

NOVELTY - A personal computer based file server is used as a backup server to store a snapshot image of the redundant array of independent disks (RAID) file system or non-RAID file system. The snapshot file system image is backed up to a slower backup medium e.g. tape. The process is reversed on restoration.

USE - For fast backup and restoration of large file systems such as RAID and non-RAID file systems.

ADVANTAGE - Enables creation of more up-to- data image of the file system. The backup process is completed without manual assistance at short time period. Reduces file system down time and file system inaccessibility during restore operation.

Title Terms/Index Terms/Additional Words: FAST; RESTORATION; METHOD; FILE; SYSTEM; SERVE; STORAGE; SNAPSHOT; IMAGE; TAPE; MEDIUM

Class Codes

International Classification (Main): G06F-012/16

File Segment: EPI;

DWPI Class: T01; T03

Manual Codes (EPI/S-X): T01-H01B1; T01-H01C3; T03-A08A5A; T03-A08E

Fast backup and restoration method for large file system , involves using file server to store snapshot image of large file system and taking backup...

Alerting Abstract USE - For fast backup and restoration of large file systems such as RAID and non-RAID file systems...

...ADVANTAGE - Enables creation of more up-to- data image of the file system. The backup process is completed without manual assistance at short time period. Reduces file system down time and file system inaccessibility during restore operation.

18/69,K/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0013705784 - Drawing available
WPI ACC NO: 2003-802929/200375
XRPX Acc No: N2003-643589

Snapshots managing method for storage file systems, involves creating baseline snapshot of file system on backup server, waiting for predetermined period of time, and performing incremental restore to the backup server

Patent Assignee: MANLEY S L (MANL-I); NETWORK APPLIANCE INC (NETW-N);

PATTERSON H (PATT-I); SKARDAL H I (SKAR-I)

Inventor: MANLEY S L; PATTERSON H; SKARDAL H I

Patent Family (3 patents, 33 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
US 20030182301	A1	20030925	US 2002101901	A	20020319	200375 B
EP 1349089	A2	20031001	EP 2003251703	A	20030319	200375 E
JP 2004038929	A	20040205	JP 200375431	A	20030319	200411 E

Priority Applications (no., kind, date): US 2002101901 A 20020319

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20030182301	A1	EN	23	14	
EP 1349089	A2	EN			

Regional Designated States,Original: AL AT BE BG CH CY CZ DE DK EE ES FI
FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR
JP 2004038929 A JA 46

Alerting Abstract US A1

NOVELTY - The method involves creating a baseline snapshot of a file system on a backup server and waiting for a predetermined period of time. An incremental restore is performed to the backup server. A new snapshot of the backup server is created. A number of snapshots are managed according to a user-defined schedule by deleting one or more snapshots.

DESCRIPTION - The baseline snapshot is created by performing a baseline dump of a file system associated with a backup client. The baseline dump is piped to a baseline file system on the backup server. A snapshot of the baseline file system is created on the backup server.

INDEPENDENT CLAIMS are also included for the following:

- 1.a backup server operatively interconnected with a backup client
- 2.a computer-readable medium, including program instructions executing on a backup server for managing many snapshots.

USE - Used in storage file systems for managing backup of data for data protection and restoration.

ADVANTAGE - The method allows the generation of snapshots of file systems, which do not inherently contain the capability to generate a snapshot. The method enables a reliable, fast and low-overhead tapeless backup using a remote destination backup file server.

DESCRIPTION OF DRAWINGS - The drawing shows a schematic block diagram of a storage file system.

- 300 Storage operating system
- 302 Media access layer
- 304 Internet protocol layer
- 306 Transport control protocol layer

308 User datagram protocol layer
312 Network file system protocol
314 Common Internet file system protocol
316 Hyper text transfer protocol

Title Terms/Index Terms/Additional Words: SNAPSHOT; MANAGE; METHOD; STORAGE
; FILE; SYSTEM; BASELINE; SERVE; WAIT; PREDETERMINED; PERIOD; TIME;
PERFORMANCE; INCREMENT; RESTORATION

Class Codes

International Classification (Main): G06F-012/00, G06F-017/30
(Additional/Secondary): G06F-011/14

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-F05E; T01-J05B; T01-S03

Snapshots managing method for storage file systems, involves creating baseline snapshot of file system on backup server, waiting for predetermined period of time, and performing incremental restore to the backup server

Alerting Abstract ...NOVELTY - The method involves creating a baseline snapshot of a file system on a backup server and waiting for a predetermined period of time. An incremental...

...The baseline dump is piped to a baseline file system on the backup server. A snapshot of the baseline file system is created on the backup server...

...ADVANTAGE - The method allows the generation of snapshots of file systems, which do not inherently contain the capability to generate a snapshot. The method enables...

Original Publication Data by Authority

Original Abstracts:

...system so that a snapshot of the file system includes the associated metadata. Backup client file systems are restored to a backup server using conventional dump and restore techniques. The backup server then utilizes...

...system so that a snapshot of the file system includes the associated metadata. Backup client file systems are restored to a backup server using conventional dump and restore techniques. The backup server then utilizes...

Claims:

...of a file system associated with a backup server, the method comprising the steps of: creating a baseline snapshot of the file system on the backup server; performing an incremental restore to the backup server; creating a...

...snapshots of a file system associated with a backup server, the method comprising the steps of: creating a baseline snapshot of the file system on the backup server; waiting a predetermined period of time; performing an incremental...

18/69,K/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0013690694 - Drawing available
WPI ACC NO: 2003-787580/200374
Related WPI Acc No: 2006-491056
XRPX Acc No: N2003-631100

File restoring method for computers, involves performing restore routine when type of file exists in active file system and performing conventional restore operation when the type of file is small

Patent Assignee: CHEN R C (CHEN-I); EDWARDS J K (EDWA-I); KAHN A C (KAHN-I); PATEL K (PATE-I); NETWORK APPLIANCE INC (NETW-N)

Inventor: CHEN R C; EDWARDS J K; KAHN A C; PATEL K

Patent Family (2 patents, 1 countries)

Patent		Application	
Number	Kind Date	Number	Kind Date Update
US 20030182253	A1 20030925	US 2002100948	A 20020319 200374 B
US 7051050	B2 20060523	US 2002100948	A 20020319 200635 E

Priority Applications (no., kind, date): US 2002100948 A 20020319

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20030182253	A1	EN	22	13	

Alerting Abstract US A1

NOVELTY - The method involves determining a type of file. A restore routine is performed when the type of file exists in the active file system. A conventional restore operation is performed when the type of file is small in size. The file routing is performed by creating a buffer tree that points to a set of data blocks and writing the buffer tree to the active file system.

DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- 1.a storage operating system containing a process for restoring a single file to an active file system from a snapshot.
- 2.a computer storing files on an active file system.

USE - Used for restoring files to active file systems in computers.

ADVANTAGE - The restoring of file technique avoids duplication of the data blocks, thereby saving substantial storage space, processing overhead and time.

DESCRIPTION OF DRAWINGS - The drawing shows a block representation of a network environment having a file server and network-connected clients.

Title Terms/Index Terms/Additional Words: FILE; RESTORATION; METHOD; COMPUTER; PERFORMANCE; ROUTINE; TYPE; EXIST; ACTIVE; SYSTEM; CONVENTION; OPERATE

Class Codes

International Classification (+ Attributes)

IPC + Level Value Position Status Version

G06F-0017/30	A	I	F	B	20060101
G06F-0017/30	A	I		R	20060101
G06F-0017/30	C	I		R	20060101

File Segment: EPI;
DWPI Class: T01

Manual Codes (EPI/S-X): T01-F05B; T01-F05E; T01-G03; T01-J05B

File restoring method for computers, involves performing restore routine when type of file exists in active file system and performing conventional restore operation when the type of file is small

Original Titles:

System and method for restoring a single file from a snapshot...

...System and method for restoring a single file from a snapshot

Alerting Abstract ...file. A restore routine is performed when the type of file exists in the active file system. A conventional restore operation is performed when the type of file is small in size. The file routing...

...USE - Used for restoring files to active file systems in computers
...

Original Publication Data by Authority

Original Abstracts:

...the file does not exist within the active file system, a new buffer tree is created that points to the data blocks stored in the snapshot.

...

...the file does not exist within the active file system, a new buffer tree is created that points to the data blocks stored in the snapshot. >

Claims:

...to determining that the type of file is a file that exists in the active file system, a restore routine; and performing, in response to determining that the type of file is a small...

18/69,K/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0012853430 - Drawing available
WPI ACC NO: 2002-712121/200277
Related WPI Acc No: 2000-194928
XRPX Acc No: N2002-561692

Database system restoring method involves changing reference to indicate its existence, when reference is placed in database system before restore time

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)

Inventor: CABRERA L F; MOHAN C; NARANG I S

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
US 6453325	B1	20020917	US 1995449600	A	19950524	200277 B
			US 1996716689	A	19960916	
			US 1997794691	A	19970203	

Priority Applications (no., kind, date): US 1996716689 A 19960916; US 1995449600 A 19950524; US 1997794691 A 19970203

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 6453325	B1	EN	33	20	C-I-P of application US 1995449600
					Continuation of application US 1996716689

Alerting Abstract US B1

NOVELTY - A reference to a file is stored in a database and a record indicating the existence of reference is stored in the **file system**. The **restoration** of database content is indicated during restore time. If the reference is placed in the database system before the restore time, the reference is changed to indicate its existence, else the record is changed to indicate that the reference is deleted.

DESCRIPTION - An INDEPENDENT CLAIM is included for file system operating method.

USE - For restoring database system having reference to **files** containing digitized movies, digitized **images**, digitized videos and computer **generated** graphics, stored in file system.

ADVANTAGE - The coordination of backup between database content of external files referenced by the contents are obtained reliably by initiating backup of a file when the operation linking the file to database contents is committed. Also, the consistency of the database content is guaranteed reliably.

DESCRIPTION OF DRAWINGS - The figure shows the flowchart explaining the database system restoring method.

Title Terms/Index Terms/Additional Words: DATABASE; SYSTEM; RESTORATION; METHOD; CHANGE; REFERENCE; INDICATE; EXIST; PLACE; TIME

Class Codes

International Classification (Main): G06F-012/00
(Additional/Secondary): G06F-017/30

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-H; T01-J05B

Database system restoring method involves changing reference to indicate its existence, when reference is placed in database system before restore time

Original Titles:

Method and means for backup and restoration of a database system linked to a system for filing data.

Alerting Abstract ...in a database and a record indicating the existence of reference is stored in the file system. The restoration of database content is indicated during restore time. If the reference is placed in the...

...USE - For restoring database system having reference to files containing digitized movies, digitized images, digitized videos and computer generated graphics, stored in file system...

18/69,K/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0006313618

WPI ACC NO: 1993-108724/

XRPX Acc No: N1993-082786

Raw incremental restore for recovering UNIX file systems - saving zero mode nodes with recent time stamps in incremental archive, overlaying raw incremental archive on top of file system to restore it, and zeroing out free nodes and data block lists to rebuild them

Patent Assignee: ANONYMOUS (ANON)

Patent Family (1 patents, 1 countries)

Patent Application

Number	Kind	Date	Number	Kind	Date	Update
TP 29305	A	19930225	TP 199329305	A	19930220	199313 B

Priority Applications (no., kind, date): TP 199329305 A 19930220

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
TP 29305	A	EN	1	0	

Alerting Abstract TP A

An incremental back-up program reads a raw disk and creates a "compressed" image of that file system, with all unmodified blocks removed. UNIX file systems consist of blocks containing 1-nodes and blocks containing data. Each 1-node contains information about a file, such as file type (mode), owner, modification times, and pointers to the data blocks that belong to that file. 1-nodes with a mode of zero are unallocated and available for file creation. Zero-mode nodes representing files that were deleted since the last back-up are written. A restore program "decompresses" archives by writing the blocks onto the raw disc, in place, where they originally existed.

All modulated 1-nodes and data are restored so the file system, in particular the zero-mode nodes that represent unallocated (or deleted) files are also restored. The restore can also be used to recover full act to overlay incremental back-ups directly on top of a file system to bring it up to date. In addition to bringing the file system up to date, the lists of free data blocks and free 1-nodes are zeroed out. The lists are then rebuilt.

ADVANTAGE - Deleted files between back-ups appear in final version of reconstructed file system, quicker process, by-passes buffer cache.

Title Terms/Index Terms/Additional Words: RAW; INCREMENT; RESTORATION; RECOVER; FILE; SYSTEM; SAVE; ZERO; MODE; NODE; RECENT; TIME; STAMP; ARCHIVE; OVERLAY; TOP; FREE; DATA; BLOCK; LIST; REBUILD

Class Codes

International Classification (Main): G06F

File Segment: EPI;

DWPI Class: T01

Raw incremental restore for recovering UNIX file systems - ...

...nodes with recent time stamps in incremental archive, overlaying raw incremental archive on top of file system to restore it, and zeroing out free nodes and data block lists to rebuild them

Alerting Abstract ...An incremental back-up program reads a raw disk and creates a "compressed" image of that file system, with all unmodified blocks removed. UNIX file systems consist of blocks containing 1-nodes...

...All modulated 1-nodes and data are restored so the file system, in particular the zero-mode nodes that represent unallocated (or deleted) files are also restored...

20/69,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0014732153 - Drawing available
WPI ACC NO: 2005-079774/200509
XRPX Acc No: N2005-070139

General parallel file system restoration method involves creating entry for file with limited attributes and no data, and providing indication that file is in unrestored state

Patent Assignee: IBM CORP (IBMC); INT BUSINESS MACHINES CORP (IBMC)

Inventor: CURRAN R J; SAWDON W A; SCHMUCK F B; WAYNE

Patent Family (3 patents, 3 countries)

Patent			Application					
Number	Kind	Date	Number	Kind	Date	Update		
US 20040267822	A1	20041230	US 2003602157	A	20030624	200509	B	
JP 2005018757	A	20050120	JP 2004173175	A	20040610	200509	E	
KR 2005001301	A	20050106	KR 200436036	A	20040520	200534	E	

Priority Applications (no., kind, date): US 2003602157 A 20030624

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20040267822	A1	EN	11	3	
JP 2005018757	A	JA	18		

Alerting Abstract US A1

NOVELTY - An entry for a file with limited attributes and no data is created and an indication that the file is in unrestored state is provided, and the file system operations including listing the file names for the file and removing the file are permitted.

DESCRIPTION - An INDEPENDENT CLAIM is also included for **file system restoration** program.

USE - For accessing general parallel file system (GPFS).

ADVANTAGE - Provides various degrees of individual file access, and dynamically driven file access even during the **file system restoration** operations.

DESCRIPTION OF DRAWINGS - The figure shows a block diagram of the file system structure.

Title Terms/Index Terms/Additional Words: GENERAL; PARALLEL; FILE; SYSTEM; RESTORATION; METHOD; ENTER; LIMIT; ATTRIBUTE; NO; DATA; INDICATE; STATE

Class Codes

International Classification (Main): G06F-012/00, G06F-015/16

(Additional/Secondary): G06F-013/10, G06F-003/06

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-F05E; T01-G03; T01-H01B4; T01-H01B7; T01-N02B1A
; T01-S03

General parallel file system restoration method involves creating entry for file with limited attributes and no data, and providing indication...

Original Titles:

QUICK RESTORATION FOR USE OF FILE SYSTEM IN ULTRA-LARGE-SCALE FILE SYSTEM...

...Rapid restoration of file system usage in very large file systems

Alerting Abstract DESCRIPTION - An INDEPENDENT CLAIM is also included for **file system restoration** program...

...Provides various degrees of individual file access, and dynamically driven file access even during the **file system restoration** operations
...

Original Publication Data by Authority

Original Abstracts:

File system restoration is made more flexible through the use of **indicators** of individual file restoration status throughout the restoration process. Such **indicators** are particularly useful in the **restoration** of large **file systems** where, for example, the number of files may range upwards of several hundred million. Since **file system restoration** for large systems takes such a relatively long time, the present invention provides various degrees of individual file access even as the restoration process is being carried out. During **file system restoration** times, file access may be full or limited to a file's attributes. Most advantageously...

...present invention is capable of providing full, dynamically driven (on-demand) file access even during **file system restoration** operations.

20/69,K/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0013456525 - Drawing available
WPI ACC NO: 2003-548015/200352
XRPX Acc No: N2003-435341

File control apparatus for computer, has restoration module that restores file allocation table based on map that is generated by storing file number in each map area corresponding to file allocation table

Patent Assignee: FUJITSU LTD (FUIT)

Inventor: ANDO T; ANDOH T

Patent Family (2 patents, 2 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
JP 2003150428	A	20030523	JP 2001343598	A	20011108	200352 B
US 20050076063	A1	20050407	US 2002154848	A	20020528	200525 E

Priority Applications (no., kind, date): JP 2001343598 A 20011108

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
JP 2003150428	A	JA	12	10	

Alerting Abstract JP A

NOVELTY - A data recording module writes data into cluster of data area repeatedly corresponding to file allocation table (FAT). FAT address is stored in FAT during data recording, to create a FAT chain. A file number is stored in each map area corresponding to FAT of each file, based on head FAT pointer and FAT chain of file attribute area, to generate a FAT map. A restoration module restores FAT based on FAT map.

DESCRIPTION - An INDEPENDENT CLAIM is also included for file system.

USE - For file system (claimed) including mass recording media such as hard disk used in computer.

ADVANTAGE - The defect file is recovered easily, without overlapping FAT.

DESCRIPTION OF DRAWINGS - The figure shows a flowchart of defect file recovery operation. (Drawing includes non-English language text).

Title Terms/Index Terms/Additional Words: FILE; CONTROL; APPARATUS; COMPUTER; RESTORATION; MODULE; ALLOCATE; TABLE; BASED; MAP; GENERATE; STORAGE; NUMBER; AREA; CORRESPOND

Class Codes

International Classification (Main): G06F-012/00
(Additional/Secondary): G06F-003/06, G11B-020/10, G11B-020/12

File Segment: EPI;

DWPI Class: T01; T03

Manual Codes (EPI/S-X): T01-C01; T01-H01B1; T03-A08A1C; T03-A10E3

File control apparatus for computer, has restoration module that restores file allocation table based on map that is generated by storing file number in each map area...

Original Titles:

FILE SYSTEM CAPABLE OF RESTORING DEFECTIVE FILE...

... File system for enabling the restoration of a deffective file
...stored in each map area corresponding to FAT of each file, based on head FAT pointer and FAT chain of file attribute area, to generate a FAT

map. A restoration module...

Original Publication Data by Authority

Claims:

...file attribute area in which at the least a file name and a head FAT pointer are recorded, comprising: a data recording module for, during data recording, repetitively writing data in...

...generate a FAT chain; and a FAT restoration module for, in accordance with the head FAT pointer in said file attribute area of said directory and said FAT chain, generating a...

20/69,K/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0007286710

WPI ACC NO: 1995-346259/199545

XRPX Acc No: N1995-258882

Dynamically allocating physical registers to procedures - involves storing stack pointer values in parameter passing registers when procedure is called and mapping used virtual registers

Patent Assignee: HEWLETT-PACKARD CO (HEWP); HITACHI LTD (HITA)

Inventor: AMERSON F C; ENGLISH R M; GUPTA R; WATANABE H; WATANABE T

Patent Family (5 patents, 4 countries)

Patent			Application					
Number	Kind	Date	Number	Kind	Date	Update		
EP 676691	A2	19951011	EP 1995104498	A	19950327	199545	B	
JP 7281897	A	19951027	JP 1995108056	A	19950406	199601	E	
US 5564031	A	19961008	US 1994223804	A	19940406	199646	E	
			US 1996629041	A	19960412			
EP 676691	A3	19961211	EP 1995104498	A	19950327	199707	E	
JP 3529888	B2	20040524	JP 1995108056	A	19950406	200434	E	

Priority Applications (no., kind, date): US 1996629041 A 19960412; US 1994223804 A 19940406

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing	Notes
EP 676691	A2	EN	20	7		
Regional Designated States, Original: DE FR GB						
JP 7281897	A	JA	15	1		
US 5564031	A	EN	17	7	Continuation of application	US 1994223804
EP 676691	A3	EN				
JP 3529888	B2	JA	16		Previously issued patent	JP 07281897

Alerting Abstract EP A2

The method of allocation registers involves defining a logic register stack formed of several registers. A local relocation term is initialised so as to define an offset for mapping the logical stack into a physical register set. An arbitrary number of stack registers are allocated to a procedure as local registers by initialising a stack **pointer** value to delimit local registers in the stack.

Each local register logical address is mapped into the physical register set in response to a local relocation term during execution of the procedure. The stack **pointer** is stored to form a second stack **pointer** value. Selected parameters are also stored.

USE/ADVANTAGE - In digital computer. Increases average speed of procedure call and return operations. Minimises number of register save and **restore** operations. Efficient temporary store **allocation**. Reduces overhead. Increases density of register use.

Title Terms/Index Terms/Additional Words: DYNAMIC; ALLOCATE; PHYSICAL; REGISTER; PROCEDURE; STORAGE; STACK; POINT; VALUE; PARAMETER; PASS; CALL; MAP; VIRTUAL

Class Codes

International Classification (Main): G06F-012/06, G06F-009/40, G06F-009/42
(Additional/Secondary): G06F-009/30, G06F-009/46

File Segment: EPI;

DWPI Class: T01
Manual Codes (EPI/S-X): T01-F04

...involves storing stack pointer values in parameter passing registers when procedure is called and mapping used virtual registers

Original Titles:

...Apparatus for register saving and restoring in a digital computer...

Alerting Abstract ...of stack registers are allocated to a procedure as local registers by initialising a stack pointer value to delimit local registers in the stack...

...set in response to a local relocation term during execution of the procedure. The stack pointer is stored to form a second stack pointer value. Selected parameters are also stored...

...Increases average speed of procedure call and return operations. Minimises number of register save and restore operations. Efficient temporary store allocation. Reduces overhead. Increases density of register use.

Original Publication Data by Authority

Original Abstracts:

...in the called procedure, rather than a priori at compile time, by adjusting register stack pointer values (TOL, OTOL). Only the number of registers actually required by the procedure need be allocated. Optionally, rotating registers (74) may be allocated among the local registers (62). Stack pointer values are stored in one of the parameter passing registers (64) when a procedure is...

...register file. Upon return from a procedure, registers are deallocated by adjusting the register stack pointers to the values stored when the procedure was called...

...in the called procedure, rather than a priori at compile time, by adjusting register stack pointer values. Only the number of registers actually required by the procedure need be allocated. Optionally, rotating registers may be allocated among the local registers. Stack pointer values are stored in one of the parameter passing registers when a procedure is called...

...register file. Upon return from a procedure, registers are deallocated by adjusting the register stack pointers to the values stored when the procedure was called.

Claims:

...registers (62) specified by the first procedure as local registers by initializing a first stack pointer value (TOL) so as to delimit the local registers (62) in the logical register stack...

...stack registers specified by the first procedure as local registers by initializing a first stack pointer value (TOL) so as to delimit the local registers in the logical register stack; </br>initializing a first rotating register pointer value (BOR) and a second rotating register pointer value (TOR) to the first stack pointer value (TOL); </br>allocating registers to the first procedure as rotating registers by incrementing the second rotating register pointer value (TOR) and the first stack pointer value (TOL) by an arbitrary number of registers specified by the first procedure as rotating...

...returning from the first procedure, deallocating the rotating registers by decrementing the second rotating register **pointer** value (TOR) and the first stack **pointer** value (TOL) by number of first procedure rotating registers</br>in connection with a register access...

20/69,K/13 (Item 13 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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0003142984

WPI ACC NO: 1984-238900/198439

Error recovery asynchronous check-pointing for DP system - transfers all tables for programs to disk upon error and returns to memory upon recovery to restore program operation

Patent Assignee: BURROUGHS CORP (BURS)

Inventor: FINLEY R E; FINLEY R F

Patent Family (5 patents, 7 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
EP 119806	A	19840926	EP 1984301634	A	19840312	198439 B
CA 1213064	A	19861021				198647 E
US 4697266	A	19870929	US 1983475154	A	19830314	198741 E
EP 119806	B	19900425	EP 1984301634	A	19840312	199017 E
DE 3482064	G	19900531				199023 E

Priority Applications (no., kind, date): US 1983475154 A 19830314

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing	Notes
EP 119806	A	EN				
Regional Designated States,Original: BE DE FR GB NL SE						
CA 1213064	A	EN				
EP 119806	B	EN				
Regional Designated States,Original: BE DE FR GB NL SE						

Alerting Abstract EP A

The system allocates files and stores data in them in a bulk memory which is up-dated and read under user control. The method of recovery from an unexpected shut down involves forming a recovery table in a RAM for each active task that changes data or allocates files. The data generated at predetermined points in the task operation is recorded in the recovery table.

The recovery tables are transferred to the bulk memory upon a shutdown during any task execution. Each recovery table contains an identification of the associated task. A **flag** is recorded in the table to indicate if the data recorded is ready for use during the error recovery process.

ADVANTAGE - Program operation is restored without data base corruption.

Equivalent Alerting Abstract US A

The method recovers an error condition during operation of a program that is modifying a data base without corrupting the data base.

The program includes calls to record the progress of the operation in a table in memory.

On the occurrence of an error condition, the tables for all programs in operation are transferred to a disc.

During error recovery, the tables are returned to memory where the information stored in the respective tables is used by each active program to restore operation of the particular program to a point where the operation can be completed without corrupting the data base.

Each program is designed to interrogate its own recovery table following the occurrence of an error condition to restore operation at a point where the integrity of the data base is assured.

ADVANTAGE - Easily duplicates single day's or single shift operation to update data base.

Title Terms/Index Terms/Additional Words: ERROR; RECOVER; ASYNCHRONOUS;
CHECK; POINT; SYSTEM; TRANSFER; TABLE; PROGRAM; DISC; RETURN; MEMORY;
RESTORATION; OPERATE; DATA; PROCESS

Class Codes

International Classification (Main): G06F-011/14
(Additional/Secondary): G06F-012/16

File Segment: EPI;

DWPI Class: T01

Manual Codes (EPI/S-X): T01-G03; T01-H09

...all tables for programs to disk upon error and returns to memory upon recovery to restore program operation

Alerting Abstract ...during any task execution. Each recovery table contains an identification of the associated task. A **flag** is recorded in the table to indicate if the data recorded is ready for use...

Original Publication Data by Authority

Claims:

...during any task execution. Each recovery table contains an identification of the associated task. A **flag** is recorded in the table to indicate if the data recorded is ready for use...

...corrupting the data base, characterised in that said method comprises: **allocating** a task **recovery** area in a random access memory during the initial processing of each task which may...

29/69,K/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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0012864151 - Drawing available
WPI ACC NO: 2002-723055/200278
XRPX Acc No: N2002-570215

**Reallocated object data tracking method used during flash memory
reclamation, involves storing physical source and destination addresses of
moved object, after asserting reclamation status**

Patent Assignee: GARNER R P (GARN-I); INTEL CORP (ITLC); SADHASIVAN A
(SADH-I)

Inventor: GARNER R P; SADHASIVAN A

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
US 20020128994	A1	20020912	US 2001800688	A	20010306	200278 B
US 6928456	B2	20050809	US 2001800688	A	20010306	200552 E

Priority Applications (no., kind, date): US 2001800688 A 20010306

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing	Notes
US 20020128994	A1	EN	10	5		

Alerting Abstract US A1

NOVELTY - A status **signal** indicating that reclamation has **started** in a memory block, is asserted. The physical addresses of source and destination memory locations corresponding to an object being moved, are stored. The object is modified and is moved to the destination memory location.

DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

1. Article of manufacture comprising medium storing reallocated object data tracking program;
2. Post reclamation object modification method;
3. Reallocated object data tracking apparatus; and
4. Flash memory reclamation method.

USE - For tracking reallocated object data during **allocation**, **de-allocation** /**re-allocation**, reclamation and **recovery** of memory e.g. flash memory.

ADVANTAGE - The ability to directly access flash memory after reclamation, recovery, etc., improves performance in applications using the reallocated data.

DESCRIPTION OF DRAWINGS - The figure shows a basic layout of a memory.

Title Terms/Index Terms/Additional Words: OBJECT; DATA; TRACK; METHOD; FLASH; MEMORY; RECLAIM; STORAGE; PHYSICAL; SOURCE; DESTINATION; ADDRESS; MOVE; AFTER; STATUS

Class Codes

International Classification (Main): G06F-017/00, G06F-007/00

File Segment: EPI;

DWPI Class: T01; U13; U14

Manual Codes (EPI/S-X): T01-F05B; T01-F05E; T01-F07; T01-H01B3; T01-H01C3; T01-S03; U13-C04B1; U13-C04B2; U14-A03; U14-A03B7; U14-A07

Alerting Abstract ...NOVELTY - A status signal indicating that reclamation has started in a memory block, is asserted. The physical addresses of source and destination memory locations...

...USE - For tracking reallocated object data during allocation , de-allocation /re- allocation , reclamation and recovery of memory e.g. flash memory...

Set	Items	Description
S1	6731	(RECREAT? OR RE() CREAT? OR RESTOR? OR RE() (MAKE? ? OR MAKING OR MADE) OR REPROD? OR RECOVER? OR FIX??? OR BACK??? () UP OR BACKUP OR RECLAM? OR RECLAIM?) (10N) (FILESYSTEM? ? OR FILE() SYSTEM? ? OR ALLOCAT?)
S2	169731	(SNAPSHOT? OR MIRROR? OR COPY??? OR COPIE? ? OR IMAGE? OR - IMAGING OR CAPTUR? OR REPLICA? OR BACKUP OR BACK??? () UP) (5N) (- FILE? ? OR RECORD? ? OR DATA? ? OR INFORMATION?? OR CONTENT? - ?)
S3	47488	S2 (7N) (CREAT? OR PRODUC? OR DEVELOP? OR ORIGINAT? OR MAKE? OR MAKING? OR MADE OR GENERAT?)
S4	945946	FLAG? ? OR INDICATOR? OR MARKER? OR REMINDER? OR SIGNAL? OR ALERT? OR ALARM? OR SIGN? ? OR CUE OR BLINKER? OR SYMBOL? ? - OR POINTER?
S5	31710	S4 (7N) (SIGNIF? OR IDENT? OR DENOTE? OR SPECIF? OR INDICAT? OR ESTABLISH? OR SHOW??? OR REVEAL? OR MARK??? OR PINPOINT?) (- 5N) (BEGIN? OR START? () POINT? ? OR INITIAL OR START? OR COMMEN- C?)
S6	6645	S2 (7N) (SAFEGUARD? OR SAFE??? ? OR SECUR? OR LOCK??? OR GUA- RD? OR SHIELD? OR PROTECT?)
S7	208657	(EXTRACT? OR REMOV? OR CUT OR CUTS OR CUTTING OR CULL??? OR GATHER? OR COLLECT? OR PARS??? OR SIFT??? OR SORT??? OR STRA- IN?) (5N) (FILE? ? OR RECORD? ? OR DATA? ? OR INFORMATION?? OR - CONTENT? ?)
S8	16727	(RECREAT? OR RE() CREAT? OR RESTOR? OR RE() (MAKE? ? OR MAKING OR MADE) OR REPROD? OR RECOVER? OR RE() (BUIL??? ? OR REBUI- L? OR RECONSTRUCT? OR RE() MAP? OR REMAP?)) (5N) (TABLE? OR LIST- ??? ? OR DIRECTOR? OR INDEX? OR CATALOG? OR REGIST?)
S9	31	S1 (100N) S5
S10	2	S9 (100N) S2
S11	0	S9 (100N) S6
S12	19	S3 (100N) S5 (100N) S7 (100N) S8
S13	0	S12 (100N) S1
S14	0	S12 (100N) (FILESYSTEM? ? OR FILE() SYSTEM? ? OR ALLOCAT? () UN- IT? ?)
S15	23	S1 (100N) (((RESTOR? OR REPLICAT?) () FILE? ?) (50N) (FILESYSTEM? ? OR FILE() SYSTEM? ?))
S16	0	S5 (100N) (((RESTOR? OR REPLICAT?) () FILE? ?) (50N) (FILESYSTEM? ? OR FILE() SYSTEM? ?))
S17	237	S1 (100N) S8
S18	51	S17 (100N) S2:S3
S19	43	S10:S15
S20	44	S18 NOT S19
S21	27	S9 NOT S19
S22	71	S20:S21
S23	4	S21 (100N) ((RESTOR? OR REPLICAT?) () FILE? ? OR FILESYSTEM? ? OR FILE() SYSTEM? ?)

File 348:EUROPEAN PATENTS 1978-2006/ 200651

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File 349:PCT FULLTEXT 1979-2006/UB=20061221UT=20061214

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10/5,K/2 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00515308 **Image available**

SYSTEM AND METHOD FOR BACKING UP COMPUTER FILES OVER A WIDE AREA COMPUTER NETWORK

PROCEDE ET SYSTEME DE COPIE DE SECOURS DE FICHIERS INFORMATIQUES VIA UN RESEAU INFORMATIQUE GRANDE DISTANCE

Patent Applicant/Assignee:

FAIRBANKS SYSTEMS GROUP,
MICKELSEN Stephen Peter,
BOLT Thomas B,
MCCLAIN Fred W,

Inventor(s):

MICKELSEN Stephen Peter,
BOLT Thomas B,
MCCLAIN Fred W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9946660 A2 19990916

Application: WO 99US5248 19990311 (PCT/WO US9905248)

Priority Application: US 9841149 19980312; US 98100914 19980619; US 99239475 19990128

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM
HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX
NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH
GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK
ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE
SN TD TG

Main International Patent Class (v7): H04L-009/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 14395

English Abstract

A laptop computer back up logic system (300) copies user selected files or automatically selected files for back up as the laptop computer (24) is being used. Changed files are backed up and stored in a hold area of the laptop computer (24). When the laptop computer (24) senses a network connection and the network (14) is idle, the blocks of the changed files are transmitted from the hold area to a remote facility (12) via the network (14). The backing up process can be triggered within the laptop computer (24) when the screen saver of the laptop computer (24) is invoked.

French Abstract

La presente invention concerne un systeme de logique de copie de secours (300) pour ordinateurs portables qui realise des copies de secours de fichiers selectionnes par l'utilisateur ou selectionnes automatiquement pendant l'utilisation de l'ordinateur portable (24). Les fichiers modifies sont copies et stockes dans une zone de reserve de l'ordinateur portable (24). Lorsque l'ordinateur portable (24) detecte une connexion reseau et que le reseau (14) est au repos. Les blocs des fichiers modifies sont transmis via le reseau (14) de la zone de reserve a la machine a distance (12). L'operation de copie de secours peut etre declenchee a l'interieur de l'ordinateur portable (24) des l'appel de

l'economiseur d'ecran de l'ordinateur portable (24).

Fulltext Availability:

Claims

Claim

... computer program product of Claim 6, in combination with the network.

14 A method for **backing up** blocks of computer **files** in a portable computer, comprising:
receiving a computer idle signal from the portable computer;
in response to the computer idle signal, **backing up** blocks in a **file**

system of the computer in accordance with a backup program.

15 The method of Claim 14, wherein the computer idle signal is established by a screen saver **start signal**.

16 The method of Claim 15, further comprising generating a user warning when one or more of the following conditions is present: a predetermined amount of **data** has been **backed up**, and the amount of unprotected **data** exceeds a predetermined threshold.

17 The method of Claim 14, wherein the backup program undertakes method steps comprising:
for at least some of the blocks in a local **file** to be **backed up**,
copying
two respective characters thereof defining respective first comparison values and generating respective digital signature codes...

15/5,K/2 (Item 2 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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01742954

Recording apparatus and recording method with data recovery means
Aufzeichnungsgerat und Aufzeichnungsverfahren mit Datenruckgewinnungsvorrichtung

Appareil d'enregistrement et methode d'enregistrement avec dispositif de recuperation de donnees

PATENT ASSIGNEE:

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216883), 1006, Oaza-Kadoma, Kadoma-shi, Osaka 571-8501, (JP), (Applicant designated States: all)

INVENTOR:

Iwasaki, Shiro, 444-1-303 Oaza Ikawa, Iizuka-shi Fukuoka 820-0054, (JP)
Gotoh, Yoshiho, 5-1-3 Higashinakahama Joto-ku, Osaka-shi Osaka 536-0023, (JP)

LEGAL REPRESENTATIVE:

Eisenfuhr, Speiser & Partner (100151), Patentanwalte Rechtsanwälte
Postfach 10 60 78, 28060 Bremen, (DE)

PATENT (CC, No, Kind, Date): EP 1426963 A2 040609 (Basic)

APPLICATION (CC, No, Date): EP 2003026117 031113;

PRIORITY (CC, No, Date): JP 2002331899 021115

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS (V7): G11B-027/36; G11B-019/04; G11B-020/18

ABSTRACT EP 1426963 A2

When the power supply of a digital recorder is unexpectedly interrupted during recording, such as when a power failure occurs or the power cord is accidentally unplugged, the file management information needed to play back digital content is not completely written to disc. When power is then turned on again, the recovery process for correcting inconsistencies between the AV data and management information left on the disc is time-consuming. By recording the recovery data used for the data recovery process when power is turned on again after a power failure to disc during data recording, the management information can be recompiled based on the recovery data when power is turned on again, and inconsistencies between the AV data and management information can be corrected. The AV data and recovery data in this case are written alternately to contiguous areas on disc.

ABSTRACT WORD COUNT: 142

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 040609 A2 Published application without search report

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	200424	1024
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SPEC A	(English)	200424	8071
--------	-----------	--------	------

Total word count - document A	9095
-------------------------------	------

Total word count - document B	0
-------------------------------	---

Total word count - documents A + B	9095
------------------------------------	------

...SPECIFICATION the AV data is written. By including the address of the AV data in the recovery data, AV data address information can be recovered for the file system in the recovery process following a power supply interruption.

Furthermore, because the AV data and recovery data are interleaved, the present invention can **restore** file management information for all AV data recorded up to the last recovery data,
Yet further...

...recovery data could contain file management information for the AV data being recorded. This enables **restoring** the file management information for the **file system** before a power supply interruption.
When a new file is created and data is written...

15/5,K/3 (Item 3 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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01637518

System and method for managing a plurality of snapshots of a file system
System und Verfahren zum Management von Schnappschüssen eines Dateisystems
Systeme et procede pour la gestion des instantanes d'un systeme de fichiers
PATENT ASSIGNEE:

Network Appliance, Inc., (2617422), 495 East Java Drive, Sunnyvale,
California 94089, (US), (Applicant designated States: all)

INVENTOR:

Patterson, Hugo, 1090 Clark Avenue, Mountain View 94040, California, (US)
Skardal, Harold I., 34 Watersedge Drive, Nashua 03063, New Hampshire,
(US)

Manley, Stephen L., 54 Eardley Crescent, Flat 4, London SW5 9JZ, (GB)

LEGAL REPRESENTATIVE:

Collins, John David (74592), Marks & Clerk 90 Long Acre, London WC2E 9RA,
(GB)

PATENT (CC, No, Kind, Date): EP 1349089 A2 031001 (Basic)
EP 1349089 A3 050420

APPLICATION (CC, No, Date): EP 2003251703 030319;

PRIORITY (CC, No, Date): US 101901 020319

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;
HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS (V7): G06F-017/30; G06F-011/14

ABSTRACT EP 1349089 A2

A system and method for managing a plurality of snapshots as provided.
A set of metadata describing a file system is contained within the file
system so that a snapshot of the file system includes the associated
metadata. Backup client file systems are restored to a backup server
using conventional dump and restore techniques. The backup server then
utilizes a user-defined snapshot management schedule to manage the set of
backups associated with the backup server. Such management of snapshots
can include deletion of snapshots based upon a variety of parameters
including the timestamp.

ABSTRACT WORD COUNT: 94

NOTE:

Figure number on first page: 10

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 031001 A2 Published application without search report

Search Report: 050420 A3 Separate publication of the search report

Examination: 050727 A2 Date of request for examination: 20050527

Examination: 050817 A2 Date of dispatch of the first examination
report: 20050705

Change: 060111 A2 Title of invention (German) changed: 20060111

Change: 060111 A2 Title of invention (English) changed: 20060111

Change: 060111 A2 Title of invention (French) changed: 20060111

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	200340	762
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SPEC A	(English)	200340	6862
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Total word count - document A	7624
-------------------------------	------

Total word count - document B	0
-------------------------------	---

Total word count - documents A + B	7624
------------------------------------	------

...SPECIFICATION overhead can be saved. For example, assume that the file

1235 is required by the **backup** client.

Under traditional snapshot restoration techniques, the entire file system 1200 would be restored. If...

...the backup client, only the bar directory 1215 and the file 1235 need to be **restored**. Such a **restoration** is shown in Fig. 13. This **restored file system** structure 1300 includes the root directory 1205, the bar directory 1215 and the required file...

...In an alternate embodiment, a full restoration can be performed using background processing while the **restore** on demand is being utilized.

Each inode of the **restored file system** has a flag that is set that alerts the **file system** layer of the storage operating system of the **backup** client that it is a partially **restored** inode. Thus, in response to such a flag, the **file system** layer can direct file access requests to the **backup** server to continue to restore on demand needed files.

An exemplary inode 1400 is shown...can also be utilized by a snapshot management program running on a backup server. The **backup** server can accept conventional restore data streams from computers utilizing **file systems** which do not incorporate snapshot capabilities. Once a backup client of the backup server has restored the backup clients **file system** to the **backup** server, the **backup** server can take snapshots of the **restored file system**. This allows for the generation of snapshots of **file systems** which do not inherently contain the capability to generate a snapshot. In addition, this system...

15/5,K/4 (Item 4 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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01135424

FILE SYSTEM IMAGE TRANSFER

DATEI-SYSTEM BILD-UBERTRAGUNG

TRANSFERT D'IMAGES DANS UN SYSTEME DE FICHIERS

PATENT ASSIGNEE:

Network Appliance, Inc., (2617422), 495 East Java Drive, Sunnyvale,
California 94089, (US), (Proprietor designated states: all)

INVENTOR:

HITZ, David, 245 Old Spanish Trail, Portola Valley, CA 94028, (US)

KLEIMAN, Steven, 157 El Monte Court, Los Altos, CA 94022, (US)

HARRIS, Guy, 46 Starlite Court, Mountain View, CA 94043, (US)

O'MALLEY, Sean, 1230 South Mary Avenue, Sunnyvale, CA 94087, (US)

LEGAL REPRESENTATIVE:

Leeming, John Gerard et al (74731), J.A. Kemp & Co., 14 South Square,
Gray's Inn, London WC1R 5JJ, (GB)

PATENT (CC, No, Kind, Date): EP 1099165 A1 010516 (Basic)

EP 1099165 B1 040929

EP 1099165 B1 040929

WO 2000007104 000210

APPLICATION (CC, No, Date): EP 99937603 990728; WO 99US17148 990728

PRIORITY (CC, No, Date): US 127497 980731

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS (V7): G06F-011/14

CITED PATENTS (EP B): EP 410630 A; EP 566967 A

NOTE:

No A-document published by EPO

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010516 A1 Published application with search report
Application: 20000405 A1 International application. (Art. 158(1))
Change: 060405 B1 Title of invention (French) changed: 20060405
Change: 060405 B1 Title of invention (English) changed: 20060405
Change: 060405 B1 Title of invention (German) changed: 20060405
Oppn None: 050921 B1 No opposition filed: 20050630
Lapse: 050706 B1 Date of lapse of European Patent in a
contracting state (Country, date): AT
20040929, CH 20040929, LI 20040929, ES
20050109, FI 20040929, GR 20041229, SE
20041229,
Lapse: 050504 B1 Date of lapse of European Patent in a
contracting state (Country, date): AT
20040929, FI 20040929, GR 20041229, SE
20041229,
Lapse: 050316 B1 Date of lapse of European Patent in a
contracting state (Country, date): FI
20040929, SE 20041229,
Grant: 040929 B1 Granted patent
Examination: 030514 A1 Date of dispatch of the first examination
report: 20030331
Examination: 010516 A1 Date of request for examination: 20010222
Assignee: 010905 A1 Transfer of rights to new applicant: Network
Appliance, Inc. (2617422) 495 East Java Drive
Sunnyvale, California 94089 US
Grant: 040929 B1 Granted patent
Lapse: 050309 B1 Date of lapse of European Patent in a
contracting state (Country, date): SE
20041229,

Lapse: 050330 B1 Date of lapse of European Patent in a contracting state (Country, date): AT 20040929, FI 20040929, SE 20041229,

Lapse: 050622 B1 Date of lapse of European Patent in a contracting state (Country, date): AT 20040929, CH 20040929, LI 20040929, FI 20040929, GR 20041229, SE 20041229,

Lapse: 050713 B1 Date of lapse of European Patent in a contracting state (Country, date): AT 20040929, BE 20040929, CH 20040929, LI 20040929, ES 20050109, FI 20040929, GR 20041229, SE 20041229,

Lapse: 051116 B1 Date of lapse of European Patent in a contracting state (Country, date): SE 20041229, FI 20040929, AT 20040929, GR 20041229, CH 20040929, LI 20040929, ES 20050109, BE 20040929, DK 20041229,

Application: 20000405 A1 International application entering European phase

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200440	1962
CLAIMS B	(German)	200440	1875
CLAIMS B	(French)	200440	2312
SPEC B	(English)	200440	9730

Total word count - document A 0

Total word count - document B 15879

Total word count - documents A + B 15879

...SPECIFICATION stream.

The sequence of storage blocks within the image stream can be optimized for a **file system** operation. For example, the sequence of storage blocks within the image stream can be optimized for a **backup** or **restore file system** operation.

In a preferred embodiment, the sequence of storage blocks is optimized so that copying...

15/5,K/5 (Item 5 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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00817755

Partitioning within a partition in a disk file storage system
Aufteilung einer Teilung in einem Plattenspeichersystem
Division d'une partition dans un systeme de memoire a disques

PATENT ASSIGNEE:

SUN MICROSYSTEMS, INC., (1392735), 2550 Garcia Avenue, MS PAL1-521,
Mountain View, California 94043-1100, (US), (applicant designated
states: DE;FR;GB;IT;NL)

INVENTOR:

Fuller, Billy J., 8510 Sutterfield Drive, Colorado Springs, Colorado
80920, (US)

LEGAL REPRESENTATIVE:

Hanna, Peter William Derek et al (72341), Tomkins & Co., 5 Dartmouth Road
, Dublin 6, (IE)

PATENT (CC, No, Kind, Date): EP 760500 A1 970305 (Basic)
EP 760500 B1 981007

APPLICATION (CC, No, Date): EP 96112923 960812;

PRIORITY (CC, No, Date): US 522753 950901

DESIGNATED STATES: DE; FR; GB; IT; NL

INTERNATIONAL PATENT CLASS (V7): G06F-003/06;

ABSTRACT EP 760500 A1

A new file system partition is added to an existing partition in disk storage space by creating a new file in the existing storage space of the existing partition and giving this file the attributes of a partition. This new file having partition attributes is referred to as a "raw file." Apparatus in a computing system for creating and accessing a raw file would comprise a storage system controller for creating a raw file of a predetermined size with the attributes of a partition, a storage space driver for accessing storage space in a data storage system and a storage access control for translating an access request for a raw file to an actual address for the raw file so the storage space driver can access the raw file based on the actual address for the raw file.

Computer implemented steps create a first file of a predetermined size in a first disk file system, allocate storage locations in the first disk file system to accommodate the storage space required by the first file, store a first file allocation map indicating storage locations allocated to the first file, and convert the first file to a raw file with a unique identifier as a file partition using the same storage locations allocated to the first file. The raw file is accessed by transforming the access request for a raw file to an actual address for a storage device driver.

ABSTRACT WORD COUNT: 239

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 970305 A1 Published application (A1with Search Report
;A2without Search Report)
Examination: 970416 A1 Date of filing of request for examination:
970217
Examination: 970618 A1 Date of despatch of first examination report:
970506
Grant: 981007 B1 Granted patent
*Assignee: 990616 B1 Proprietor of the patent (transfer of rights):
SUN MICROSYSTEMS, INC. (1392737) 901 San
Antonio Road, MS PAL01-521 Palo Alto,
California 94303 (US) (applicant designated
states: DE;FR;GB;IT;NL)
*Assignee: 990616 B1 Previous applicant in case of transfer of
rights (change): SUN MICROSYSTEMS, INC.
(1392735) 2550 Garcia Avenue, MS PAL1-521

Mountain View, California 94043-1100 (US)
(applicant designated states: DE;FR;GB;IT;NL)

Oppn None: 990929 B1 No opposition filed: 19990708

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9841	1021
CLAIMS B	(German)	9841	946
CLAIMS B	(French)	9841	1212
SPEC B	(English)	9841	2841
Total word count - document A			0
Total word count - document B			6020
Total word count - documents A + B			6020

15/5,K/6 (Item 6 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00736977

Distributed systems with replicated files
Verteilte Systeme mit replizierten Dateien
Systemes distribues avec des fichiers dupliques

PATENT ASSIGNEE:

AT&T Corp., (589370), 32 Avenue of the Americas, New York, NY 10013-2412,
(US), (Proprietor designated states: all)

INVENTOR:

Rao, Chung-Hwa Herman, 4304 Springbrook Drive, Edison, New Jersey 08820,
(US)

Skarra, Andrea H., 26 Orchard Road, Chatham, New Jersey 07928, (US)

LEGAL REPRESENTATIVE:

Watts, Christopher Malcolm Kelway, Dr. (37391), Lucent Technologies (UK)
Ltd, 5 Mornington Road, Woodford Green Essex, IG8 0TU, (GB)

PATENT (CC, No, Kind, Date): EP 694839 A2 960131 (Basic)

EP 694839 A3 980204

EP 694839 B1 010829

APPLICATION (CC, No, Date): EP 95305025 950719;

PRIORITY (CC, No, Date): US 282683 940729

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-009/46

CITED PATENTS (EP B): EP 398496 A

ABSTRACT EP 694839 A2

Techniques for providing replicated files in a distributed system. A replicated file has a set of copies in components of the distributed system. Operations on the copies have the same semantics for the application processes accessing them as operations on a single copy of a file in a system where all processes execute on the same host. These semantics are achieved by means of a distributed synchronization system. Each replicated file has a read token and a write token. In order for an application process to perform an operation on a replicated file, the token required for the operation must be in the process's host and the process must have access to the token. Tokens are passed between hosts by token servers which respond to requests for tokens from application processes and from other token servers. The techniques are implemented using a library which replaces a standard I/O library, and may thus be employed without modification to hardware or the operating system. (see image in original document)

ABSTRACT WORD COUNT: 186

NOTE:

Figure number on first page: 7

LEGAL STATUS (Type, Pub Date, Kind, Text):

Change: 001122 A2 Title of invention (French) changed: 20001005

Application: 960131 A2 Published application (A1with Search Report
;A2without Search Report)

Oppn None: 020821 B1 No opposition filed: 20020530

Grant: 010829 B1 Granted patent

Search Report: 980204 A3 Separate publication of the European or
International search report

Examination: 980923 A2 Date of filing of request for examination:
980728

Examination: 991229 A2 Date of dispatch of the first examination
report: 19991112

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text Language Update Word Count

CLAIMS A	(English)	EPAB96	423
CLAIMS B	(English)	200135	574
CLAIMS B	(German)	200135	517
CLAIMS B	(French)	200135	621
SPEC A	(English)	EPAB96	15460
SPEC B	(English)	200135	15318
Total word count - document A			15888
Total word count - document B			17030
Total word count - documents A + B			32918

...SPECIFICATION replicated files.

An advantage of the invention is that the operations necessary to maintain the **replicated file** can be implemented at the user level of the distributed system, and consequently, the invention...

...special operating system. A preferred embodiment is implemented as a modification of the user-level **backup file system** of the parent patent application.

The foregoing and other objects and advantages of the invention... backend file descriptor 1111 to identify the file, and finally removes entry 1119 from open **replicated** file list 1117.

Using the User-Level Backup **File System** to Implement Replicated Files: FIG. 13

Backup File system 501 of the parent of the present patent application was effective in ensuring that there...the no token lock, the only process in host system 1302 which may write to **replicated file** 1325 is backend server 515, which is of course responding to backup messages 512 from...

...Operation of system 1301 is as follows: as described in the discussion of user-level **backup file system** 501 above, lib.3d 507 is bound either statically or dynamically to the code for the application processes 1309 which perform operations on **replicated files**. Then, files are specified in front-end replicated tree 505 as **replicated files**. The version of lib.3d 507 used in system 1301 replaces the standard I/O...foregoing Detailed Description has disclosed to those skilled in the art how the user-level **backup file system** of the parent patent application may be modified to produce a distributed system with replicated...

...system is implemented by means of seven different locks on each local copy of the **replicated file**. The locks are in turn implemented using standard operating system locks on a vector of...

...Detailed Description discloses the best mode of implementing a distributed system with a user-level **replicated file system** presently known to the inventors, many variations are possible. In particular, the principles of the invention may be employed in systems which have nothing to do with the user-level **backup file system** of the parent patent application. For example, the synchronization techniques disclosed herein are substantially independent of the techniques used to specify **replicated files** or to perform file backup operations and may indeed be used for purposes other than to synchronize operations on **replicated files**. Further, the synchronization may be implemented in ways other than the locking protocols employed in...

...SPECIFICATION replicated files.

An advantage of the invention is that the operations necessary to maintain the **replicated file** can be implemented at the user level of the distributed system, and consequently, the invention...

...special operating system. A preferred embodiment is implemented as a modification of the user-level **backup file system** of the parent patent application.

The foregoing and other objects and advantages of the invention... backend file descriptor 1111 to identify the file, and finally removes entry 1119 from open **replicated** file list 1117.

Using the User-Level Backup File System to Implement Replicated Files: FIG. 13

Backup File system 501 of the parent of the present patent application was effective in ensuring that there...the no token lock, the only process in host system 1302 which may write to **replicated file** 1325 is backend server 515, which is of course responding to backup messages 512 from...

...Operation of system 1301 is as follows: as described in the discussion of user-level **backup file system** 501 above, lib.3d 507 is bound either statically or dynamically to the code for the application processes 1309 which perform operations on **replicated files**. Then, files are specified in front-end replicated tree 505 as **replicated files**. The version of lib.3d 507 used in system 1301 replaces the standard I/O...foregoing Detailed Description has disclosed to those skilled in the art how the user-level **backup file system** of the parent patentapplication may be modified to produce a distributed system with **replicated files**. Sequential read and write operations performed on local copies of the **replicated files** have the same semantics as read and write operations on files which exist in only...

15/5,K/7 (Item 7 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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00697056

Replication facility
Vervielfaltigungssystem
Systeme de duplication

PATENT ASSIGNEE:

MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington
98052-6399, (US), (Proprietor designated states: all)

INVENTOR:

Neeman, Yuval, 2765 - 91st Place N.E., Bellevue, Washington 98004, (US)
Cook, Peter J., 1430 Sycamore Dr. S.E., Issaquah, Washington 98027, (US)
Miller, Arnold S., 12806 S.E. 22nd Place, Bellevue, Washington 98005,
(US)

Raman, Balan S., 6120 147th Place N.E., Redmond, Washington 98052, (US)

LEGAL REPRESENTATIVE:

Grunecker, Kinkeldey, Stockmair & Schwanhauser Anwaltssozietat (100721)
, Maximilianstrasse 58, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 663640 A1 950719 (Basic)
EP 663640 B1 030820

APPLICATION (CC, No, Date): EP 95100255 950110;

PRIORITY (CC, No, Date): US 181704 940114

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

CITED REFERENCES (EP B):

SOFTWARE - PRACTICE AND EXPERIENCE, DEC. 1987, UK, vol. 17,no. 12, ISSN
0038-0644, pages 923-940, PURDIN T D M ET AL 'A file replication
facility for Berkeley Unix'

PROCEEDINGS OF THE SUMMER 1993 USENIX CONFERENCE, PROCEEDINGS OF THE
SUMMER 1993 USENIX CONFERENCE, CINCINNATI, OH, USA, 21-25 JUNE 1993,
1993, BERKELEY, CA, USA, USENIX ASSOC, USA, pages 279-290, FOWLER G ET
AL 'A user-level replicated file system'

IBM TECHNICAL DISCLOSURE BULLETIN, vol. 37,no. 1, January 1994 NEW YORK,
US, pages 573-574, ANONYMOUS 'Xcopy Function for Access Control
Profiles'

OPERATING SYSTEMS REVIEW (SIGOPS), vol. 23,no. 3, 1 July 1989 pages
126-136, XP 000140319 WEDDE H F ET AL 'OPERATING SYSTEM SUPPORT FOR
ADAPTIVE DISTRIBUTED REAL-TIME SYSTEMS IN DRAGON SLAYER'

SECURITY AND PERSISTENCE. PROCEEDINGS OF THE INTERNATIONAL WORKSHOP ON
COMPUTER ARCHITECTURES TO SUPPORT SECURITY AND PERSISTENCE OF
INFORMATION, BREMEN, WEST GERMANY, 8-11 MAY 1990, ISBN 3-540-19646-3,
1990, BERLIN, GERMANY, SPRINGER-VERLAG, GERMANY, pages 289-300,
CAMPBELL R H ET AL 'Considerations of persistence and security in
Choices, an object-oriented operating system'

IEEE TRANSACTIONS ON SOFTWARE ENGINEERING, vol. 15,no. 11, 1 November
1989 pages 1459-1470, XP 000072265 HAC A 'A DISTRIBUTED ALGORITHM FOR
PERFORMANCE IMPROVEMENT THROUGH FILE REPLICATION, FILE MIGRATION, AND
PROCESS MIGRATION';

ABSTRACT EP 663640 A1

A replication facility provides for the replication of files or
portions of files in a distributed environment. The replication facility
is able to replicate any subtree within a distributed namespace of the
distributed environment. The replication facility provides
multi-mastered, weakly consistent replication. The replication facility
supports both public replication and private replication. (see image in
original document)

ABSTRACT WORD COUNT: 59

NOTE:

Figure number on first page: 1A

LEGAL STATUS (Type, Pub Date, Kind, Text):

Grant: 030820 B1 Granted patent
Application: 950719 A1 Published application (A1with Search Report
;A2without Search Report)
Oppn None: 040811 B1 No opposition filed: 20040524
Examination: 960313 A1 Date of filing of request for examination:
960111
Examination: 991013 A1 Date of dispatch of the first examination
report: 19990826

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200334	1650
CLAIMS B	(German)	200334	1616
CLAIMS B	(French)	200334	1811
SPEC B	(English)	200334	5328
Total word count - document A			0
Total word count - document B			10405
Total word count - documents A + B			10405

...SPECIFICATION CA, USA, USENIX Assoc, USA, pages 279-290, Fowler G. et al. 'A user-level **replicated file system** ' discloses a user-level **replicated file system** and describes a replication mechanism. To avoid replicating temporary files, the replication mechanism introduces a ...

...tree, by which users are able to define one or more sub-trees of a **file system** that need to be **replicated** . **Files** under replicated trees can be replicated to a backup physical **file system** whenever their context/attributes are changed. The replication mechanism allows users to define one or more sub-trees of a **file system** as replicated trees. Replicated trees are described as allowing users to avoid replicating the temporary...

...It is the object of the present invention to provide a more secure method of **replicating files** in a distributed system, and a corresponding distributed system.

This object is solved by the...

15/5,K/8 (Item 8 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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00654817

File backup file system

Dateisicherungssystem

Systeme de sauvegarde de fichier

PATENT ASSIGNEE:

AT&T Corp., (589370), 32 Avenue of the Americas, New York, NY 10013-2412,
(US), (Proprietor designated states: all)

INVENTOR:

Fowler, Glenn Stephen, 2322 Lyde Place, Scotch Plains, New Jersey 07076,
(US)

Huang, Yennun, 33 Linberger Drive, Bridgewater, New Jersey 08807, (US)
Korn, David Gerard, 303 Mercer Street A107, New York, New York 10003,
(US)

Rao, Chung-Hwa Herman, 4304 Springbrook Drive, Edison, New Jersey 08820,
(US)

LEGAL REPRESENTATIVE:

Watts, Christopher Malcolm Kelway, Dr. et al (37391), Lucent Technologies
(UK) Ltd, 5 Mornington Road, Woodford Green Essex, IG8 0TU, (GB)

PATENT (CC, No, Kind, Date): EP 629950 B1 011024 (Basic)

APPLICATION (CC, No, Date): EP 94304064 940607;

PRIORITY (CC, No, Date): US 80037 930618

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-011/14

CITED PATENTS (EP B): GB 2251502 A; US 5133065 A

CITED REFERENCES (EP B):

GORDON LETWIN 'Inside OS/2' 1988 , MICROSOFT PRESS , REDMOND, WASHINGTON
* page 110, line 9 - line 11 *;

ABSTRACT EP 629950 A1

A backup file system which can be used without modification of application programs, the operating system, or the hardware. The backup file system is implemented by means of a dynamically-linkable replacement library and user-level processes on a primary computer system and a backup computer system. The dynamically-linkable replacement library has the same interfaces as a standard dynamically-linkable library of file operations. The functions in the replacement library perform the same file operations as their counterparts in the standard library; in addition, they send messages specifying the just-performed operation to a user-level process on the backup computer system. The user-level process executes the operation specified in the message on a backup file in the backup computer system. The files to be backed up are specified by identifying subtrees in the namespace of the primary file system; the subtrees make up a user-defined namespace. The backup file system is made fault tolerant by the use of monitor processes which monitor the backup computer system and the processes of the backup file system and deal with failures as required to keep the backup file system operating. (see image in original document)

ABSTRACT WORD COUNT: 190

NOTE:

Figure number on first page: 7

LEGAL STATUS (Type, Pub Date, Kind, Text):

Grant: 011024 B1 Granted patent

Examination: 950809 A1 Date of filing of request for examination:
950608

Oppn None: 021016 B1 No opposition filed: 20020725

Examination: 970924 A1 Date of despatch of first examination report:

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF2	232
CLAIMS B	(English)	200143	642
CLAIMS B	(German)	200143	658
CLAIMS B	(French)	200143	667
SPEC A	(English)	EPABF2	8656
SPEC B	(English)	200143	8931
Total word count - document A			8889
Total word count - document B			10898
Total word count - documents A + B			19787

...SPECIFICATION backend file descriptor 1111 to identify the file, and finally removes entry 1119 from open **replicated file** list 1117.

Conclusion

The foregoing Detailed Description has disclosed to those of ordinary skill in...

...the best mode presently known to the inventors of making and using a user-level **backup file system**. As will be apparent to those skilled in the art, there are many ways of implementing user-level **backup file systems** which employ the principles of the user-level **backup file system** disclosed herein. For example, the preferred embodiment is implemented in systems running the UNIX operating...

...SPECIFICATION backend file descriptor 1111 to identify the file, and finally removes entry 1119 from open **replicated file** list 1117.

Conclusion

The foregoing Detailed Description has disclosed to those of ordinary skill in...

...the best mode presently known to the inventors of making and using a user-level **backup file system**. As will be apparent to those skilled in the art, there are many ways of implementing user-level **backup file systems** which employ the principles of the user-level **backup file system** disclosed herein. For example, the preferred embodiment is implemented in systems running the UNIX operating...

15/5,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00266141

File backup facility for a community of personal computers.
Dateisicherungseinrichtung für eine Gemeinschaft von Personalcomputern.
Amenagement de sauvegarde de fichier pour une communauté d'ordinateurs
personnels.

PATENT ASSIGNEE:

Hewlett-Packard Limited, (402421), Nine Mile Ride, Wokingham, Berkshire
RG11 3LL, (GB), (applicant designated states: DE;FR;GB)

INVENTOR:

Bartlett, Paul, 28 Monk Road, Bishopston Bristol BS7 8LE, (GB)
Lieske, Steven, 24 Cedar Hall, Frenchay Bristol, (GB)
Simms, Mark, 30 Codrington Road, Bishopston Bristol BS7 8ET, (GB)
Hains, Tracey, 9 Seyton Walk, Stoke Gifford Bristol BS12 6UW, (GB)
Walker, Patrick, 4 Manor Close, Tockington Bristol BS12 4NT, (GB)
Winsborrow, Lesley, 3 Adringal Cottages Horton, Chipping Sodbury Bristol
BS17 6QP, (GB)

LEGAL REPRESENTATIVE:

Squibbs, Robert Francis (36273), Hewlett-Packard Limited Cain Road,
Bracknell, Berkshire RG12 1HN, (GB)

PATENT (CC, No, Kind, Date): EP 259912 A1 880316 (Basic)
EP 259912 B1 911016

APPLICATION (CC, No, Date): EP 87201556 870818;

PRIORITY (CC, No, Date): GB 8622010 860912

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-011/14;

CITED REFERENCES (EP A):

DATABASE AND NETWORK JOURNAL, vol. 16, no. 2, 1986, pages 12-13, London,
GB; "The 3+ network family"
PROCEEDINGS OF DISTRIBUTED COMPUTING, FALL COMPCON 80, 21st IEEE COMPUTER
SOCIETY INTERNATIONAL CONFERENCE, Washinton, D.C., 23rd-25th September
1980, pages 101-107, IEEE, US; T.M. RYAN: "Backup and recovery for
distributed interactive computer systems"
SOFTWARE-PRACTICE AND EXPERIENCE, vol. 15, no. 9, September 1985, pages
889-899, John Wiley & Sons, Ltd, Chichester, GB; R.J. DAKIN et al.: "A
large scale network storage facility"
DIGEST OF PAPERS OF THE SPRING COMPCON 85, 30th IEEE COMPUTER SOCIETY
INTERNATIONAL CONFERENCE, San Francisco, 25th-28th February 1985, pages
144-147, IEEE, US; B. EISENHARD: "Network disk and file servers";

ABSTRACT EP 259912 A1

A file backup facility is provided for a community of personal
computers (PC1-3) linked to a central station (10) that includes a mass
storage device (14). The backup facility enables a user to select files
for backup to the mass storage device (14) and then subsequently to
restore selected ones of the backed-up files. Concurrent backup from
several personal computers is permitted with the files subject to backup
being divided into blocks and the blocks interleaved for storage on the
mass storage device (14). The selection of files for backup or restore is
effected by presenting to the user a directory listing all relevant
subdirectories and files and permitting the user to select/deselect files
individual or by directory.

ABSTRACT WORD COUNT: 122

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 880316 A1 Published application (A1with Search Report
;A2without Search Report)

Examination: 880601 A1 Date of filing of request for examination:

880324

Examination: 891213 A1 Date of despatch of first examination report:
891030

Grant: 911016 B1 Granted patent

Oppn None: 921007 B1 No opposition filed

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	941
CLAIMS B	(German)	EPBBF1	933
CLAIMS B	(French)	EPBBF1	1085
SPEC B	(English)	EPBBF1	12929
Total word count - document A			0
Total word count - document B			15888
Total word count - documents A + B			15888

...SPECIFICATION of files to be restored from backup, to request and receive the files selected for **restore** from the central station, and to update the **operating system** file directory with an entry corresponding to each **restored** file ; and

- the central station is arranged to store files transmitted thereto in said mass storage...information on each block is passed back to the relevant PC for storage in its **backup** directory together with data on the breakdown of each **file** into blocks.

During **restore** , block information on the files selected for **restore** is retrieved from the backup directory of a PC and used to request the mini...

15/5,K/14 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01187536 **Image available**

TECHNIQUES FOR FACILITATING BACKUP AND RESTORE OF MIGRATED FILES
TECHNIQUES DESTINEES A FACILITER LA SAUVEGARDE ET LA RESTAURATION DE
FICHIERS TRANSFERES

Patent Applicant/Assignee:

ARKIVIO INC, 2700 Garcia Avenue, Mountain View, California 94043, US, US
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

MU Yuedong, 1189 Boynton Avenue, San Jose, California 95117, US, US
(Residence), CN (Nationality), (Designated only for: US)

Legal Representative:

KOTWAL Sujit B (et al) (agent), TOWNSEND AND TOWNSEND AND CREW LLP, Two
Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 2004109663 A2-A3 20041216 (WO 04109663)

Application: WO 2004US16922 20040528 (PCT/WO US04016922)

Priority Application: US 2003474879 20030530

Designated States:

(All protection types applied unless otherwise stated - for applications
2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO
RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO
SE SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-011/00

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 10613

English Abstract

Techniques for facilitating backup and restore operations in a storage
environment comprising migrated files. Backup and restore operations on
migrated files are performed without triggering recall while maintaining
data integrity.

French Abstract

L'invention concerne des techniques destinees a faciliter les operations
de sauvegarde et de restauration dans un environnement de stockage
comprenant des fichiers transferes. Les operations de sauvegarde et de
restauration sur des fichiers transferes sont mises en oeuvre sans
declenchement de rappel tout en conservant l'integrite des donnees.

Legal Status (Type, Date, Text)

Publication 20041216 A2 Without international search report and to be
republished upon receipt of that report.

Search Rpt 20050127 Late publication of international search report

Republication 20050127 A3 With international search report.

Republication 20050127 A3 Before the expiration of the time limit for
amending the claims and to be republished in the
event of the receipt of amendments.

Fulltext Availability:
Detailed Description

Detailed Description

... size of the file corresponding to the stub file, modifies the logical size of the **restored file** to match the determined logical size, determines contents (e.g., metadata) of the stub file...

...restored stub file.

[0086] Various measures may be used to preserve the consistency of the **file system** due to 1 5 errors that may occur during the **restore** operation described above. The recovery operations may be performed by recovery module 212 depicted in...

15/5,K/15 (Item 6 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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01175754 **Image available**

TRANSPARENT FILE REPLICATION USING NAMESPACE REPLICATION

REPLICATION TRANSPARENTE DE FICHIERS PAR REPLICATION D'ESPACES DE NOMMAGE

Patent Applicant/Assignee:

NEOPATH NETWORKS INC, 3945 Freedom Circle,, Suite 300, Santa Clara, CA
95054, US, US (Residence), US (Nationality), (For all designated states
except: US)

Patent Applicant/Inventor:

WONG Thomas K, 1118 Mataro Ct., Pleasanton, CA 94566, US, US (Residence),
US (Nationality), (Designated only for: US)

TSIRIGOTIS Panagiotis, 1575 Tenaka Pl., #D-5, Sunnyvale, CA 94087, US, US
(Residence), GR (Nationality), (Designated only for: US)

IYENGAR Anand, 4306 Collins CT., #204, Mountain View, CA 94040, US, US
(Residence), US (Nationality), (Designated only for: US)

CHAWLA Rajeev, 5819 Carmel Way, Union City, CA 94589, US, US (Residence),
US (Nationality), (Designated only for: US)

Legal Representative:

CARTWRIGHT Dorian (et al) (agent), Fenwick & West LLP, 801 California
Street, Mountain View, CA 94041, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200497686 A1 20041111 (WO 0497686)

Application: WO 2004US12846 20040426 (PCT/WO US04012846)

Priority Application: US 2003465578 20030424; US 2003465579 20030424; US
2004831701 20040423; US 2004831376 20040423

Designated States:

(All protection types applied unless otherwise stated - for applications
2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO
RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO
SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-017/30

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 7628

English Abstract

A NAS switch provides a centralized point of reconfiguration after a network change that alleviates the need for reconfiguration of each connected client. A file server module (114) includes a file server interface (210), a replication module (220), and a synchronization module (230) with a persistent buffer (235). The file server interface manages client requests before replication without assistance. The replication module replicates a namespace separately from data contained therein. Afterwards, synchronization module looks-up the switch file handle in a file handle replication table to determine if the object has been replicated, and if so, sends one of the replica NAS file handles. The synchronization module also maintains synchronicity between the primary and replica file servers through critical NAS requests that modify

objects such as create, delete, and the like. The synchronization module includes a persistent buffer (236) such as a non-volatile memory to improve data integrity.

French Abstract

Un commutateur NAS constitue un point de reconfiguration centralise apres une modification du reseau, qui permet d'eviter de devoir reconfigurer chaque client connecte. Un module serveur de fichiers (114) comprend une interface de serveur de fichiers (210), un module de replication (220), et un module de synchronisation (230) dote d'une memoire tampon persistante (235). L'interface de serveur de fichiers gere les demandes des clients avant leur replication sans assistance. Le module de replication replique un espace de donnees separement des donnees qu'il contient. Ensuite, le module de synchronisation consulte l'indicateur de fichier de commutateur dans une table de replication d'indicateurs de fichiers, afin de determiner si l'objet a ete replique et, si tel est le cas, envoie l'un des indicateurs de fichiers NAS repliques. Le module de synchronisation maintient egalement la synchronicite entre les serveurs de fichiers originaux et repliques, par l'intermediaire de demandes NAS critiques qui modifient les objets, par exemple en les creant, en les effacant et analogues. Le module de synchronisation comprend une memoire tampon persistante (236) telle qu'une memoire non volatile afin d'ameliorer l'integrite des donnees.

Legal Status (Type, Date, Text)

Publication 20041111 A1 With international search report.

Publication 20041111 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Fulltext Availability:

Detailed Description

Detailed Description

... 825 the primary file handle as the output NAS file handle. If the current primary file system ED does not match the primary file handle, the reproduction module 230 determines a replica file handle from the current primary file system ID. As such, the reproduction module 230 searches an associated file handle replication table for a primary file handle matching the original primary file handle. The reproduction module 230 returns 835 the replicated file handle of the same entry. In one embodiment, the synchronization module 230 first checks a status of the replica file server 130 in a replica file system status table. The replica file system status table contains: the replication location ID, the replicated file system ID; and a replica file system status representing whether a replica file server 130 is ready to act in a primary...

15/5,K/16 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01164058 **Image available**

**A DEVICE FOR RESTORING AT LEAST ONE OF FILES, DIRECTORIES AND APPLICATION
ORIENTED FILES IN A COMPUTER TO A PREVIOUS STATE**

**DISPOSITIF RESTAURANT DES FICHIERS, DES REPERTOIRES ET DES FICHIERS
ORIENTES APPLICATIONS DANS UN ORDINATEUR PASSANT A L'ETAT PRECEDENT**

Patent Applicant/Assignee:

SYSTEMOK AB, Stena Center 1B, S-412 92 Goteborg, SE, SE (Residence), SE
(Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

Alexander Hars, Landalagatan 36B/2311, S-411 30 Goteborg, SE, SE
(Residence), SE (Nationality), (Designated only for: US)

Lars Karlsson, Berzeliigatan 25, S-412 53 Goteborg, SE, SE (Residence),
SE (Nationality), (Designated only for: US)

Patent and Priority Information (Country, Number, Date):

Patent: WO 200486226 A1 20041007 (WO 0486226)

Application: WO 2004SE453 20040325 (PCT/WO SE04000453)

Priority Application: SE 2003833 20030326

Designated States:

(All protection types applied unless otherwise stated - for applications
2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO
RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO
SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-011/16

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 6905

English Abstract

A device (1) for restoring items such as files, directories and application-oriented files in a computer to a previous state is disclosed. The device comprises a processor (3), a memory (5), input/output means (7). The memory (5) comprises a storage area (9), backup area (11), an attribute area (13), an activity log file (15), and a state content area (17). The backup area (11) comprises originals of the items. The storage area (9), comprises changes to items. The attribute area (13) comprises copies of attributes to files and directories. The activity log file (15) comprises events that have occurred after the time of the previous state. The state content area (17) comprises content in relation to items at the time corresponding to the previous state. The device (1) is configured for managing the process of the restoring.

French Abstract

L'invention concerne un dispositif (1) permettant de restaurer des articles, dont des fichiers, des repertoires et des fichiers orientes applications dans un ordinateur passant a l'etat precedent. Le dispositif comprend un processeur (3), une memoire (5), des moyens d'entree/sortie

(7). La memoire (5) comporte une zone de memorisation (9), une zone de sauvegarde (11), une zone d'attribut (13), un fichier journal d'activite (15) et une zone de contenu d'etat (17). La zone de sauvegarde (11) comporte les originaux des articles. La zone de memorisation (9) comporte les modifications apportees aux articles, la zone d'attribut (13) comporte des copies d'attributs aux fichiers et repertoires, le fichier journal d'activite (15) comporte des evenements qui sont survenus apres l'etat precedent. La zone de contenu d'etat (17) comporte un contenu en rapport avec les articles au moment correspondant a l'etat precedent. Le dispositif (1) est configure de maniere a gerer le processus de restauration.

Legal Status (Type, Date, Text)

Publication 20041007 A1 With international search report.

Fulltext Availability:

Detailed Description

Detailed Description

... are from that moment monitored and logged. The user can at any time chose to **restore** a previous state.

In the invention a **file system** filter driver is used, a **restore** application and an area to preserve original files. The **file system** filter driver is a continuously running integrated part of the operating system and it is...

...computer sta'r'-e

up.

A hidden area is used for storing data required for **restoring files** and directory to their previous state.

There is a hidden area on every partition monitored...

...hard

5 drive) can contain several partitions. The present implementation of the invention requires that **file systems** on all partitions to be used are based on a commonly used tree structure.

The following components are needed to **restore files** and directories to a predetermined state.

1.Backup area: Contains copies of original files and...

15/5,K/17 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01129557 **Image available**

DATA RECOVERY TECHNIQUES IN STORAGE SYSTEMS

TECHNIQUES DE RECUPERATION DE DONNEES DANS DES SYSTEMES DE STOCKAGE

Patent Applicant/Assignee:

ARKIVIO INC, 2700 Garcia Avenue, Mountain View, CA 94043, US, US
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

FOLEY Matthew J, 637 Frederick Avenue, Santa Clara, CA 95050, US, US
(Residence), US (Nationality), (Designated only for: US)

KAWECKI Lewis, 8728 Lock Levon Avenue, Kings Beach, CA 96143, US, US
(Residence), US (Nationality), (Designated only for: US)

LE Nam, 2764 Glauser Drive, San Jose, CA 95133, US, US (Residence), US
(Nationality), (Designated only for: US)

YAKIR Rony, 148 Eunice Avenue, Mountain View, CA 94040, US, US
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

KOTWAL Sujit B (et al) (agent), TOWNSEND AND TOWNSEND AND CREW LLP, Two
Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200451481 A1 20040617 (WO 0451481)

Application: WO 2003US38246 20031201 (PCT/WO US03038246)

Priority Application: US 2002430464 20021202

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK
LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC
SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-012/00

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 16490

English Abstract

Techniques for maintaining data consistency in a storage environment (100). In a HSM controlled storage environment (100), techniques (200) are provided for automatically detecting (212, 226) and correcting (214, 228) inconsistencies after a file system or a portion thereof has been restored from backup (120). The file system may store data files, tag files, and/or repository files that have been restored from backup (120).

French Abstract

L'invention concerne des techniques d'entretien de la coherence de donnees dans un environnement de stockage (100). Dans un environnement de stockage commande par un gestionnaire d'entrepasage hierarchique (HSM) (100), des techniques (200) permettent de detecter de facon automatique (212, 226) et de corriger (214, 228) les incoherences d'un systeme de fichier ou d'une partie de celui-ci ayant ete restocke a partir de la

sauvegarde (120). Le systeme de fichier peut stocker des fichiers de donnees, des fichiers d'etiquettes et/ou des fichiers d'archivage ayant ete restockes a partir de la sauvegarde (120).

Legal Status (Type, Date, Text)

Publication 20040617 A1 With international search report.

Publication 20040617 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Fulltext Availability:

Claims

Claim

... incorporate

an embodiment of the present invention;

[00171

Fig.2isasimplifiedhigh-levelflowchartdepictingamethodofdetectingand correcting inconsistencies in a **restored** file system according to an embodiment of the present

I 0 invention;

[00181

Fig.3isasimplifiedhigh-levelflowchartdepictingamethodofdetectingand correcting tag files and data files-related inconsistencies in a **restored** file system according to

an embodiment of the present invention;

100191

Fig.4isasimplifiedhigh-levelflowchartdepictingamethodofcomparingSDbtag file entries to files in the **file system** and taking appropriate actions to correct any detected

inconsistencies according to an embodiment of the...

...a method of detecting and correcting tag files and data files related inconsistencies in a **restored** file system according to an embodiment of the present invention;

[00211 Fig. 6 is a simplified high-level flowchart depicting a method of comparing CI)b entries to files in the **restored** file system and taking appropriate actions to correct the detected inconsistencies according to an embodiment of the...

...is a simplified high-level flowchart depicting a method of processing repository files in the **restored** file system according to an embodiment of the present

invention; and

[00231 Fig. 8 is a simplified...

...Sdb I 1 2 and Cdb I 1 6 and the files stored on the **restored** file system . Unless corrected, these inconsistencies can cause errors and severely hamper the performance of the storage...

...200 depicting a method of detecting and 3 0 correcting or resolving inconsistencies in a **restored** file system according to an embodiment of the present invention. The method depicted in Fig. 2 may...

...1 1

processing may be performed by a server affected by the crash and whose **file system** has been **restored** . The processing may also be performed by SMS I 1 0, or by SMS 1...

...tag file entries in the SI)b that do not have corresponding files in the

restored file system are determined (step 218). If such entries exist then they represent inconsistencies ...in the SI)b and CI)b is made consistent with the files in the restored file system.

14

PCT/US2003/038246 [00651 The restored file system may also store repository files that have been restored from backup . These repository files represent data that has been migrated (or remigrated) from other servers. In one embodiment, the repository files are stored in a specific directory in the file system . These restored repository files that have been restored from backup may be inconsistent as they may not reflect migrations and remigrations that may have occurred after the backup was performed and before the file system crashed. Accordingly, after the data files and tag files have been processed as described above...

...a method of detecting and correcting tag files and data files-related inconsistencies in a restored file system according to

I 9

an embodiment of the present invention. According to an...

...step 402). The selected tag file entry is then compared to tag files in the restored file system to determine if a tag file exists in the file

1 7

system corresponding to...

...selected tag file entry (step 404). If a corresponding tag file is found in the restored file system corresponding to the selected SI)b tag file entry (step 406), then processing continues with step 414. [00781 If a corresponding tag file is not located in the file system for the selected tag file entry in step 406, then a check is made to...

...a method of detecting and correcting tag files and data files related inconsistencies in a restored file system according to an embodiment of the present invention. According to an embodiment of...

...The selected CI)b tag file entry is then compared to tag files in the restored file system to determine if a tag file exists in the file system corresponding to the selected tag file entry (step 604). If a corresponding tag file is found in the restored file system corresponding to the selected CI)b tag file entry (in step 606), then processing

continues with step 614. 1

[00911 If a corresponding tag file is not located in the file system for the selected CI)b tag file entry in step 606, then a check is...

...invention are able to automatically detect and correct various inconsistencies that may be present after restoration of data in a file system controlled by a storage application such as HSM. As a result of the processing performed...

...in the SI)b and CM is also updated to reflect the files in the restored file system . [00951 According to an embodiment of the present invention, missing repository file can be identified...

...repository servers. In one embodiment, the repository files are stored in specific directories on the file systems of the various servers. The directory names identify 1 5 the machine (machine id) the...

...a simplified high-level flowchart 700 depicting a method of processing repository files in the restored file system according to an embodiment of the present invention. According to an embodiment of the

present...

- ...tag created The SDb entry is deleted. A tag file. No corresponding tag file after **backup** . corresponding CDb entry exists, if found in the restored file system. found, is also deleted...
- ...tag file after the backup. information from the SDb entry. found in the restored file **system** .
Corresponding repository file exists. (3) SDb lost. CDb comprises an An unsynchronized alternate recall The...
- ...in the Originating server could not inform lost as it was not contained in the **restored file system** . the CDb of the recall before the **backup** . The data file may be Corresponding repository file does data crash event. retrievable from an...
- ...No migrated (creating tag). information from the CDb entry.
corresponding tag file found in the **restored file system** .
Corresponding repository file exists.
Inconsistencies related to repository files
(1) Repository file exists after The...

15/5,K/18 (Item 9 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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01039513 **Image available**

**PROVIDING A SNAPSHOT OF A SUBSET OF A FILE SYSTEM
INSTANTANE D'UN SOUS-ENSEMBLE D'UN SYSTEME DE FICHIERS**

Patent Applicant/Assignee:

INTERNATIONAL BUSINESS MACHINES CORPORATION, New Orchard Road, Armonk, NY
10504, US, US (Residence), US (Nationality)
IBM DEUTSCHLAND GMBH, Pascalstrasse 100, 70569 Stuttgart, DE, DE
(Residence), DE (Nationality), (Designated only for: LU)

Inventor(s):

SAWDON Wayne A, 6362 San Anselmo Way, San Jose, CA 95119, US,
SCHMUCK Frank B, 406-A Union Avenue, Campbell, CA 95008, US,

Legal Representative:

GIGERICH Jan (agent), IBM Deutschland GmbH, Intellectual Property, 70548
Stuttgart, DE,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200369477 A2-A3 20030821 (WO 0369477)
Application: WO 2003EP164 20030110 (PCT/WO EP03000164)
Priority Application: US 200277129 20020215

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK
SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SI SK
TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-011/14

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 25318

English Abstract

A system, method and computer readable medium for providing a snapshot of a subset of a file system. A first snapshot of a first set of source files in a file system is generated. The first snapshot includes an inode corresponding to each source file in the first set of files. Stored in each inode is a first identifier associated with the first set of files and a second identifier associated with the time of the first snapshot. Next, a second snapshot of a second set of source files is taken. The second snapshot includes an inode corresponding to each source file in the second set of files. Stored in each inode are a first identifier and a second identifier. Subsequent snapshots are taken every first period and every second period for the first set of files and the second set of files, respectively.

French Abstract

L'invention concerne un systeme, un procede et un support lisible par un ordinateur, permettant d'obtenir un instantane d'un sous-ensemble d'un systeme de fichiers. Ce procede consiste a produire un premier instantane d'un premier ensemble de fichiers source d'un systeme de fichiers. Le

premier instantane comprend un inode correspondant a chaque fichier source du premier ensemble de fichiers. Chaque inode renferme un premier identificateur associe au premier ensemble de fichiers et un second identificateur associe a l'heure du premier instantane. Le procede consiste ensuite a produire un second instantane d'un second ensemble de fichiers source. Le second instantane comprend un inode correspondant a chaque fichier source du second ensemble de fichiers. Chaque inode renferme un premier identificateur et un second identificateur. Les instantanes suivants sont produits a chaque premiere periode et a chaque seconde periode pour le premier ensemble de fichiers et le second ensemble de fichiers, respectivement.

Legal Status (Type, Date, Text)

Publication 20030821 A2 Without international search report and to be republished upon receipt of that report.
 Examination 20031016 Request for preliminary examination prior to end of 19th month from priority date
 Search Rpt 20040401 Late publication of international search report
 Republication 20040401 A3 With international search report.

Fulltext Availability:
 Detailed Description

Detailed Description

... this snapshot dataset to file
 system B. Upo n receipt of the snapshot 0 dataset, file system B restores, at step 1528, the snapshot dataset so as to act as a...

...to identify the snapsho-t
 corresponding to the snapshot identifier for snapshot 0 from file system A is the last data set restored or applied to file system B.

After this restoration, file system B contains a copy of the data that was present on file system A when snapshot '0 was captur6d. After this restoration, file system B captures, at step 1530, snapshot 0. Recapturing snapshot 0 on file system B has the effect of establishing a clean snapshot dataset on

- 47

file system B and thereby allowing a more efficient access to that snapshot on file system B. It is to be noted that this description uses the same snapshot identifiers (e...48 superbloc to identify the snapshot corresponding to the snapshot identifier for snapshot I from file system A is the last data set restored or applied to file system B. File...After file system B has been restored the most recent snapshot that was received from file system A, file system B takes over, at step 1550, as the primary file system. This...

...step 1554, snapshot 3. File system A in this example then becomes available again, and file system A restores, 'at step 1556, the last snapshot of file system A, snapshot 1 in this example, that was communicated to file system B. After restoration of the file system on file system A, file system A is in a known state and then is initialized, at step 1558, and acts...sequence, exemplary embodiments that support snapshot sequences perform additional processing to maintain file consistency after

restoring a file system from snapshot sequence.

Embodiments of the present invention that implement snapshot sequences traverse the snapshot...

...inodes that are saved in the snapshot belong to the snapshot sequence that is being **restored**. The **file system** **restores** the file to the same inode that is in the snapshot if the inode in...is allocated to a file that is not in the snapshot sequence that is being **restored**, the **file system** relocates the **restored** file retrieved from the snapshot to an unallocated inode in the active file system. The **restored** from the snapshot, the **file system** then traverses the inode file for the active **file system** to locate all of the directories that belong to a **restored** sequence. Each restored directory is then scanned to locate directory entries for the files that...

15/5,K/19 (Item 10 from file: 349)
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00989390 **Image available**

FILE BACKUP SYSTEM AND METHOD

SYSTEME ET PROCEDE DE SAUVEGARDE EFFICACE DE FICHIERS INFORMATIQUES

Patent Applicant/Assignee:

DATACENTERTECHNOLOGIES N V, Antwerpsesteenweg 19, B-9080 Lochristi, BE,
BE (Residence), BE (Nationality), (For all designated states except:
US)

Patent Applicant/Inventor:

DE SPIEGELEER Kristof, Orchideestraat 91, B-9041 Oostakker, BE, BE
(Residence), BE (Nationality), (Designated only for: US)

Legal Representative:

SAAM Christophe (agent), Patents & Technology Surveys SA, Rue des
Terreaux 7, Case postale 2848, CH-2001 Neuchatel, CH,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200319412 A2-A3 20030306 (WO 0319412)

Application: WO 2002EP2588 20020308 (PCT/WO EP0202588)

Priority Application: EP 2001120041 20010820

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT (utility model) AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR
CU CZ (utility model) CZ DE (utility model) DE DK (utility model) DK DM
DZ EC EE (utility model) EE ES FI (utility model) FI GB GD GE GH GM HR HU
ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX
MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK (utility model) SK SL TJ TM TN
TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-017/30

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5442

English Abstract

A system and method for efficiently backing up and restoring computer files to a central storage system. A hashing key is computed for each file to be backed up on a target computer. The hashing key is compared to a list of hashing keys stored locally to see if the local file has been previously backed up. If the hashing key is not listed locally, then the hashing key is compared to a list of hashing keys of centrally backed up files. Only if the hashing key is not present in both the local and the central list is the file backed up. Backed up files may be renamed to their hashing key for further efficiencies.

French Abstract

Systeme et procede de sauvegarde et de restauration efficaces de fichiers informatiques dans un systeme de stockage central. Une cle de hachage est calculee pour chaque fichier a sauvegarder sur un ordinateur cible. La cle de hachage est comparee a une liste de cles de hachage mises en memoire localement pour voir si le fichier local a ete precedemment sauvegarde. Si la cle de hachage n'est pas repertoriee localement, elle est alors comparee a une liste de cles de hachage de fichiers sauvegardes

de maniere centrale. Le fichier n'est sauvegarde que si la cle de hachage ne figure ni sur la liste locale ni sur la liste centrale. Les fichiers sauvegardes peuvent etre rebaptises selon leur cle de hachage pour une plus grande efficacite.

Legal Status (Type, Date, Text)

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Search Rpt 20031030 Late publication of international search report

Republication 20031030 A3 With international search report.

Fulltext Availability:

Detailed Description

Detailed Description

... and historical copies of hashing lists 404, 408, so that any individual machine can be **restored** to its file system state for some given point in time past. Obviously, ...the file system of a damaged machine.

The system restores the damaged machine's file **system** by **restoring** each file listed on the local machine's database ...database 404 itself in the central storage system 400 in order to preserve the computer file **system** status record, or to **back up** this local database in the central storage system 400.

Similarly, **restoring** a computer system to some prior historical file **system** state, should this feature be implemented, merely requires obtaining the local database for that point in time, and then **restoring** the file **system** files according to that historical local database. The historical ...backup and restore processes. By running the hashing process on the backed up and/or **restored** files, a hashing code is generated which can be compared to the original hashing code. If...

15/5,K/20 (Item 11 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00772866 **Image available**

METHOD AND SYSTEM FOR BACKING UP AND RESTORING FILES STORED IN A SINGLE
INSTANCE STORE

PROCEDE ET SYSTEME DE SAUVEGARDE ET DE RESTAURATION DE FICHIERS MEMORISES
DANS UNE MEMOIRE A INSTANCE UNIQUE

Patent Applicant/Assignee:

MICROSOFT CORPORATION, One Microsoft Way, Redmond, WA 98052, US, US
(Residence), US (Nationality)

Inventor(s):

BOLOSKY William J, 24622 S.E. Mirrormont Drive, Issaquah, WA 98027, US
CUTSHALL Scott M, 816 289th Avenue N.E., Carnation, WA 98014, US

Legal Representative:

MICHALIK Albert S, Michalik & Wylie, PLLC, Suite 103, 14645 Bel-Red Road,
Bellevue, WA 98007, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200106366 A1 20010125 (WO 0106366)

Application: WO 2000US18990 20000712 (PCT/WO US0018990)

Priority Application: US 99356383 19990716

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

CA JP

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Main International Patent Class (v7): G06F-011/14

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 14025

English Abstract

A method and system for backing up and restoring single instance store (SIS) files comprising links to common store files. A dynamic link library (DLL) including an interface enables a backup/restore application to properly backup and restore SIS-enabled volumes including SIS links and their corresponding store files. For each link to be backed up, the DLL tracks whether its corresponding common store file has already been identified for backing up to the backup application, such that it is identified only one, whereby only one copy of a common store file is backed up per volume, regardless of the number of additional links pointing thereto. For each link to be restored, the DLL tracks whether its corresponding common store file has already been identified for restoring to the restore application, or is already present on the volume, whereby a common store file for a link file is only restored to a volume only once and if not already present on that volume.

French Abstract

L'invention concerne un procede et un systeme de sauvegarde et de restauration de fichiers de memoire a instance unique (SIS) comportant des liens vers des fichiers de memoire commune. Une bibliotheque de liens dynamiques (DLL) comprenant une interface permet a une application de sauvegarde/restauration d'effectuer une sauvegarde et une restauration appropriees de volumes actives par une SIS comportant des liens SIS et leurs fichiers memoire correspondants. Pour chaque lien a sauvegarder, la DLL repere si le fichier de memoire commune correspondant a deja ete determine pour une sauvegarde dans l'application de sauvegarde, de sorte

qu'il ne soit determine qu'une seule fois, une seule copie d'un fichier de memoire commune etant sauvegardee par volume, independamment du nombre de liens supplementaires pointes vers ce dernier. Pour chaque lien a restaurer, la DLL repere si le fichier de memoire commune correspondant a deja ete determine pour une restauration dans l'application de restauration ou s'il se trouve deja dans le volume, un fichier de memoire commune pour un fichier de liens n'etant restaure dans un volume qu'une fois et seulement s'il ne se trouve pas deja dans ce volume.

Legal Status (Type, Date, Text)

Publication 20010125 A1 With international search report.

Publication 20010125 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

Examination 20010628 Request for preliminary examination prior to end of 19th month from priority date

Fulltext Availability:

Detailed Description

Detailed Description

METHOD AND SYSTEM FOR BACKING UP AND RESTORING FILES

STORED IN A SINGLE INSTANCE STORE

TECHNICAL FIELD

The invention relates generally to computer systems and data storage, and more particularly to the backing up and restoring of files of a file system .

13BACKGROUND OF THE INVENTION

The contents of a file of a file system may be identical to the contents stored in one or more other files. While some...

15/5,K/21 (Item 12 from file: 349)
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00757904

PROFILE SERVICE ARCHITECTURE
ARCHITECTURE DE SERVICE PROFIL

Patent Applicant/Assignee:

SUN MICROSYSTEMS INC, 901 San Antonio Road, Palo Alto, CA 94303, US, US
(Residence), US (Nationality)

Inventor(s):

WESCHLER Paul William Jr, 12278 Utica Place, Broomfield, CO 80020, US

Legal Representative:

BURTON Carol W, Hogan & Hartson LLP, Suite 1500, 1200 17th Street,
Denver, CO 80202, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200070507 A1 20001123 (WO 0070507)

Application: WO 2000US9439 20000410 (PCT/WO US0009439)

Priority Application: US 99315220 19990519

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB
GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG
UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-017/30

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 11689

English Abstract.

A mechanism for managing a plurality of profile data structures where each profile data structure comprising a hierarchical structure of attributes. The mechanism includes a core profile service engine having a number of predefined built-in functions. A first pluggable interface within the core profile service supports runtime binding to remote protocol adapters. A second pluggable interface within the core profiling service supports runtime binding to external datastore plug-ins. A third pluggable interface within the core profiling service supports runtime binding to external service plug-ins where the external service plug-ins provide functions for manipulating profile data structures in addition to built in functions provided by the core profile service.

French Abstract

La presente invention concerne un mecanisme de gestion de plusieurs structures de donnees profil dans lequel chaque structure de donnees profil comprend une structure hierarchique d'attributs. Le mecanisme comprend un moteur de service profil noyau dote d'un nombre de fonctions predefinies integrees. A l'interieur du service profil noyau, une premiere interface connectable supporte un executable de liaison aux adapteurs de protocole a distance, une deuxieme interface connectable supporte un executable de liaison a des connectables de stockage de donnees externes, et une troisieme interface connectable supporte un

executable de liaison a des connectables de service externes qui mettent en oeuvre des fonctions destinees a manipuler des structures de donnees profil en supplement aux fonctions integrees mises en oeuvre par le service profil noyau.

Legal Status (Type, Date, Text)

Publication 20001123 A1 With international search report.

Publication 20001123 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Examination 20010125 Request for preliminary examination prior to end of 19th month from priority date

Fulltext Availability:

Detailed Description

Detailed Description

... the file system information is not accessible to computers running other operating systems. Similarly, a **file system** cannot be amended to serve as a directory for other types of devices (e.g., an email directory). Moreover, the 5 functionality of a **file system** is rigidly **fixed** and is not readily extended to provide new functionality such as authentication, **replication**, **file system** logging, and the like. These types of changes require rewrite and recompile of the **file system** software. A need exists for a directory system that is flexible and adaptable to service...

15/5,K/22 (Item 13 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00543731 **Image available**

FILE SYSTEM IMAGE TRANSFER

TRANSFERT D'IMAGES DANS UN SYSTEME DE FICHIERS

Patent Applicant/Assignee:

NETWORK APPLIANCE INC,

Inventor(s):

HITZ David,

KLEIMAN Steven,

HARRIS Guy,

O'MALLEY Sean,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200007104 A1 20000210 (WO 0007104)

Application: WO 99US17148 19990728 (PCT/WO US9917148)

Priority Application: US 98127497 19980731

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

CA CN JP KR AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Main International Patent Class (v7): G06F-011/14

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 17739

English Abstract

The invention provides a method and system for duplicating all or part of a file system while maintaining consistent copies of the file system. The file server maintains a set of snapshots, each indicating a set of storage blocks making up a consistent copy of the file system as it was at a known time. Each snapshot can be used for a purpose other than maintaining the coherency of the file system, such as duplicating or transferring a backup copy of the file system to a destination storage medium. In a preferred embodiment, the snapshots can be manipulated to identify sets of storage blocks in the file system for incremental backup or copying, or to provide a file system backup that is both complete and relatively inexpensive.

French Abstract

L'invention concerne une procede et un systeme permettant de copier la totalite ou une partie d'un systeme de fichiers tout en conservant des copies coherentes du systeme de fichiers. Ce dernier conserve une serie d'instantanes designant chacun une serie de blocs constituant une copie coherente du systeme de fichiers tel qu'il se presentait a un moment connu. Chaque instantane peut servir a d'autres fins qu'au maintien de la coherence du systeme de fichiers; ils peuvent par exemple servir a realiser une copie de secours du systeme de fichiers ou a la transferer a un support d'enregistrement destinataire. Dans un mode de realisation prefere, les instantanes peuvent etre manipules pour identifier des series de blocs d'enregistrement dans le systeme de fichiers, de maniere a realiser des copies ou des sauvegardes incrementielles ou a obtenir une copie de systeme de fichiers qui soit a la fois complete et relativement bon marche.

Fulltext Availability:

Detailed Description

Detailed Description

... 9

The sequence of storage blocks within the image stream can be optimized for a **file system** operation. For example, the sequence of storage blocks within the

p

image stream can be optimized for a **backup or restore file system** operation.

In a preferred embodiment, the sequence of storage blocks is optimized so that copying...

15/5,K/23 (Item 14 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00535049 **Image available**

BACKUP AND RESTORE FOR HETEROGENEOUS FILE SERVER ENVIRONMENT
SYSTEME DE SAUVEGARDE ET DE RESTAURATION D'UN ENVIRONNEMENT DE SERVEUR DE
FICHIERS HETEROGENE

Patent Applicant/Assignee:

NETWORK APPLIANCE INC,

Inventor(s):

MUHLESTEIN Mark,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9966401 A1 19991223

Application: WO 99US13784 19990617 (PCT/WO US9913784)

Priority Application: US 9899844 19980619

Designated States:

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CA CN JP KR AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Main International Patent Class (v7): G06F-011/14

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 3156

English Abstract

The invention provides a file server that provides for backup and restore of files in a heterogeneous file server environment. Metadata associated with each file by each model or protocol is preserved across backup and restore operations. The file server performs at least three tasks as part of the backup and restore operations. The file server notes all file attributes associated with each file in either model. These file attributes can include Unix perms, ownership and timestamp information, and link information. On backup, the file server records those file attributes in an analogous record using a different model. The file server records each element of Unix metadata as an NT Extended Attribute for use by an NT backup element. On restore, the file server restores those file attributes from the analogous record. The NT Extended Attributes provided by an NT restore element are translated into Unix metadata. The file server provides an element for translating between Unix metadata and NT Extended Attributes transparently to the NT backup and restore elements, so that NT backup and restore elements that were created without reference to the heterogeneous file server environment can be used.

French Abstract

L'invention concerne un serveur de fichiers qui permet la sauvegarde et la restauration de fichiers dans un environnement de serveur de fichiers heterogene. Des meta-donnees associees a chaque fichier par chaque modele ou protocole sont preservees par des operations de sauvegarde et de restauration. Le serveur de fichiers effectue au moins trois taches faisant partie des operations de sauvegarde et de restauration. Le serveur de fichiers note tous les attributs de fichiers associes a chaque fichier dans l'un ou l'autre modele. Ces attributs de fichiers peuvent inclure des autorisations Unix, des informations de propriete et d'horodateur et des informations de lien. Pendant la sauvegarde, le serveur de fichiers effectue un enregistrement analogique desdits attributs de fichiers en utilisant un modele different. Le serveur de fichiers enregistre chaque element des meta-donnees Unix en tant qu'attribut NT etendu utilisable par un element NT de sauvegarde. Pendant

la restauration, le serveur de fichiers restaure les attributs de fichiers de l'enregistrement analogique. Les attributs NT etendus fournis par un element NT de restauration sont traduits en meta-donnees Unix. Le serveur de fichiers fournit aux elements NT de sauvegarde et de restauration, un element a traduire de maniere transparente entre les meta-donnees Unix et et les attributs NT etendus, de sorte que les elements NT de sauvegarde et de restauration crees sans reference a l'environnement du serveur de fichiers heterogene puissent etre utilises.

Fulltext Availability:
Detailed Description

Detailed Description
... techniques.

8

The invention may be used to record items of metadata from the NT **file system** model in the Unix **file system** model, and to retrieve those items of metadata for **restoring files** using the NT **file system** model. This would allow use of Unix **backup** and **restore** elements in addition to or instead of NTbackup and restore elements.